

TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM 1922

No. 208

OLGA GATHMANN FOLEY, ADMINISTRATRIX OF THE
ESTATE OF LOUIS GATHMANN, DECEASED, APPEL-
LANT,

THE UNITED STATES

APPEAL FROM THE COURT OF CLAIMS

FILED OCTOBER 29, 1922.

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1921.

No. 601.

OLGA GATHMANN FOLEY, ADMINISTRATRIX OF THE
ESTATE OF LOUIS GATHMANN, DECEASED, APPEL-
LANT,

vs.

THE UNITED STATES.

APPEAL FROM THE COURT OF CLAIMS.

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Court of Claims.

No. 33052.

OLGA GATHMANN FOLEY, Administratrix of the Estate of Louis Gathmann, Deceased.

I. History of Proceedings.

The original petition herein was filed April 17, 1915, in the name of Louis Gathmann.

On January 4, 1918, on motion made therefor and allowed by the court, Olga Gathmann Foley, as Administratrix of the Estate of Louis Gathmann, deceased, was substituted as plaintiff herein.

On July 31, 1919, by leave of court, the plaintiff filed an amended petition, which is as follows:

II. Amended Petition.

Filed July 31, 1919.

To the Chief Justice and Judges of the United States Court of Claims:

Your petitioner respectfully represents and shows:

1. Claimant is the administratrix of the estate of Louis Gathmann, deceased. Claimant is a citizen of the United States, a resident of the District of Columbia; has at all times borne true allegiance to the Government of the United States, and has not in any way voluntarily aided, abetted, or given encouragement to rebellion against the said Government.

Claimant's decedent was a citizen of the United States for many years and, at the dates hereinafter mentioned, he was a resident of the District of Columbia, and during his citizenship he at all times bore true allegiance to the Government of the United States, and at no time or in any way had he voluntarily aided, abetted, or given encouragement to rebellion against the said Government.

2 This claimant has been substituted as party claimant in lieu of Louis Gathmann, deceased, on motion duly made Jan. 4, 1918.

2. For a year or more prior to March 24, 1903, decedent and Admiral Charles O'Neil, United States Navy, then Chief of the Bureau of Ordnance, United States Navy, had frequent conferences on the subject of improving the methods of drying smokeless powder, the United States being at that time and since engaged in the manufacture of smokeless powder at its powder plant at Indian Head, Maryland, and on March 24, 1903, pursuant to the last previous conversation between them on that subject, decedent delivered to Admiral O'Neil, as Chief of the Bureau of Ordnance, the following proposition in writing:

1839 Vernon Ave., N. W.,
Washington, D. C., March 24, 1903.

SIR:

The undersigned has made an invention "Method of drying materials," for which patent has been filed Feb. 9, 1903, Series No. 142,653.

Now, in consideration of the Navy Department building an apparatus for testing this method, without expense to me, I hereby give the Navy Department the option of using my method of drying materials, if they find it to their advantage, by paying to me, my heirs, or my legal representatives, \$0.01 (one cent) for each pound of material dried by my method.

Very respectfully,

LOUIS GATHMANN.

Admiral O'Neil,
Chief of Bureau of Ordnance.

With the writing aforesaid, decedent caused to be delivered to the Chief of the Bureau of Ordnance a plan or drawing for an experimental apparatus.

Thereafter Admiral O'Neil, as Chief of the Bureau of Ordnance, caused to be delivered to decedent the following acceptance and agreement in writing:

3 Address Bureau of Ordnance, Navy Department, and refer to No. 3585.

Washington, D. C., March 26, 1903.

SIR:

Referring to your communication of March 24th, 1903, offering the Navy Department the option of using your method of drying materials, on payment of one cent per pound on materials so dried:

The Bureau has to inform you that it accepts your proposition, and has ordered one experimental apparatus for drying smokeless powder, constructed in accordance with plan submitted by you. This apparatus will be tested without expense to you, and, if it works satisfactorily to the Bureau, the Bureau agrees to pay you, your heirs or legal representatives, one cent for each pound of smokeless powder dried by the method covered by your application or applications filed or to be filed with the U. S. Patent Office, provided a patent or patents is or are issued to you therefor.

Respectfully,

CHARLES O'NEIL,
Chief of Bureau of Ordnance.

Mr. Louis Gathmann,
1839 Vernon Avenue,
Washington, D. C.

4 3. The United States ordered constructed one experimental apparatus for drying smokeless powder, which was constructed in accordance with the plans submitted by decedent, and

after it was installed and ready for experimental use decedent visited the powder works at Indian Head frequently and gave his time and advice to the development of the process in a practical way, all at his own expense and without charge.

4. February 9, 1903, decedent filed in the United States Patent Office his application for patent on the method of drying materials, Serial No. 142,653, and he was granted a patent thereon June 28, 1904, No. 763,387. The drawing of the plan for an experimental apparatus that decedent caused to be delivered to the Chief of the Bureau of Ordnance March 24, 1903, was the same drawing which he had filed February 9, 1903, with his application for patent above described. Subsequently decedent continued his study and investigation of the subject, and January 22, 1904, he filed his application, Serial No. 190,224, in the United States Patent Office, and June 28, 1904, letters patent, No. 763,388, were issued to him covering a method of drying substances.

The applications for patents above described were those that were in the mind of the Chief of the Bureau of Ordnance when he wrote the letter to decedent March 26, 1903, and it was pursuant to that letter that decedent filed his application January 22, 1904.

5. Subsequent to June 28, 1904, and particularly at the times hereinafter specified, and at the powder works of the United States at Indian Head, Maryland, the United States made use of the processes and methods covered by the above described patents in the manufacture of smokeless powder, as follows:

5	Dates.	Pounds.
	April 17 to June 30, 1909.....	250,197
	July 1, 1909 to June 30, 1910.....	9,660,686
	July 1, 1910 to June 30, 1911.....	2,000,000
	July 1, 1911 to June 30, 1912.....	2,470,000
	July 1, 1912 to June 30, 1913.....	2,765,000
	July 1, 1913 to June 30, 1914.....	3,352,388
	July 1, 1914 to April 17, 1915.....	3,176,790
	Total	23,675,061

6. By reason of the premises, and for the use of the processes and inventions mentioned for and during the dates above specified, the United States is indebted to the estate of the decedent in the sum of \$236,750, no part of which has been paid.

7. The estate of the decedent is the sole owner of this claim, no person or corporation is interested therein, and no assignment or transfer of the claim or any part thereof or interest therein has been made.

8. The decedent's estate is justly entitled to the amount herein claimed from the United States for the period of time specified above, as this administratrix is advised and believes, and that there are no just credits or set-offs to be allowed, as she is advised and believes.

Wherefore, claimant asks judgment against the United States for Two hundred thirty-six thousand seven hundred and fifty dollars (\$236,750).

DUDLEY & MICHENER,
Attorneys of Record.

CHARLES J. PENCE, *Of Counsel.*

6 DISTRICT OF COLUMBIA, ss:

Louis T. Michener, of lawful age, being by me first duly sworn according to law, deposes and says that he is a member of the firm of Dudley & Michener, who are attorneys of record for claimant by power of attorney herein filed; that he knows the contents of the above amended petition; that the material averments therein contained are true in substance and in fact as he is informed and believes; and he makes this affidavit on such information and belief.

LOUIS T. MICHENER.

Subscribed and sworn to before me this 28th day of July, 1919.
[SEAL.]

DAVID WOLF,
Notary Public.

III. *General Traverse.*

No demurrer, plea, answer, counterclaim, set-off, claim of damages, demand, or defense in the premises, having been entered on the part of the defendants, a general traverse is entered as provided by Rule 34.

7 IV. *History of Further Proceedings.*

On December 10 and 11, 1919, the case was argued and submitted on merits by Mr. Chas. J. Pence, for plaintiff, and by Mr. Wm. D. Eakin, for defendant.

On March 1, 1920, the Court filed tentative findings of fact.

On May 5, 1920, the case was argued and submitted on tentative findings of fact by Messrs. Chas. T. Pence and Louis T. Michener, for plaintiff, and by Mr. Melville D. Church, for defendant.

V. *Findings of Fact, Conclusion of Law, and Opinion by Campbell, Ch. J., and Dissenting Opinion by Booth, J.*

Entered May 31, 1921.

This case having been heard by the Court of Claims, the court, upon the evidence, makes the following

Findings of Fact.

I.

The plaintiff is the administratrix of the estate of Louis Gathmann, deceased, and is a citizen of the United States, residing in the District of Columbia.

The plaintiff's decedent was a citizen of the United States for many years and, at the dates hereinafter mentioned, was a resident of the District of Columbia.

The plaintiff has been substituted as party plaintiff in lieu of the said Louis Gathmann, deceased, on motion duly made January 4, 1918.

II.

In the manufacture of smokeless powder the grains are formed by forcing a plastic mass of the prepared powder material through dies and then cutting the resulting macaronilike strings into short pieces. The plastic condition of the material is due to the presence of ether and alcohol, used in the material to facilitate the process of manufacture. As the material comes from the dies it contains about 40 per cent moisture, composed of ether and alcohol, called the solvent. This solvent must be reduced, by drying, before the powder is ready for use, the reduction of solvent being from about 40 per cent to between 4 and 7 per cent, according to caliber. This drying process required several months' time, the ether and alcohol constituting the solvent were expensive, and the reduction of the drying period and the recovery and saving of the solvent for reuse were problems especially engaging the minds of Government officials and others interested in the manufacture of such powder.

8 As early as the year 1900 the Government, in its manufacture of smokeless powder, had used, along with other methods of drying, what was known as the closed-circuit method of drying and solvent recovery. In this method there is, generally speaking, a closed circuit embracing a heating chamber, a powder chamber, and a condensing chamber, with the necessary connecting pipes or conduits and means for effecting circulation of the air in the circuit, as by fan or by gravity. In operation the warm air from the heating chamber passes on to the powder chamber, where it absorbs solvent from the "green" powder, then passes on to the condensing chamber, where the solvent carried by it is condensed to liquid form, the air then passing on to the heating chamber again for reheating and repetition of the cycle.

When the powder is newly made, or "green," the solvent is given off rapidly; but as the percentage of the solvent in the mass is reduced, it volatilizes less rapidly and comes off less freely. When the solvent is reduced to about 10 per cent, this closed-circuit process is discontinued and the drying of the powder is completed in the ordinary drying houses.

III.

The apparatus used by the Government, in the year 1900, in its said method of drying and solvent-recovery is illustrated by the drawing, Exhibit 1, by this reference made a part of these findings of fact. The plans for this apparatus were secured by the Government from the California Powder Works, of California, by whom the apparatus was understood to have been originated.

In this apparatus, a number of small powder cans, with a capacity of about 100 pounds of powder each, were connected at their bases by pipes with a main pipe leading to the bottom of a condensing chamber. From the top of the condensing chamber, a pipe continued on to a heating chamber, and from there to a fan chamber, from whence it proceeded and connected by different branch pipes with the tops of the powder cans, thus forming a closed circuit.

Referring to said Exhibit 1, the fan drew hot air from the heater, drove it through the air pipe to the tops of the powder cans, through which cans it descended, absorbing solvent from the powder, passing on through another pipe to the condenser, where the solvent was condensed and drawn off in liquid form, the air passing through the pipe back to the heater and fan to repeat the cycle.

Following this solvent recovery treatment, the powder was placed in drying houses and dried to a proper condition merely by allowing air to circulate over and through it.

This solvent recovery process, used by the Government in 1900, was discontinued, after about a year's use, because of the amount of leakage due to the number of joints connecting the numerous small powder cans used.

IV.

The said Louis Gathmann was an inventor. He had been interested in quite a number of ordnance matters and was familiar with many of them. He was acquainted with Admiral O'Neil, Chief of Ordnance, Navy Department, and they were on friendly terms for six or more years prior to 1903. He frequently went to the Navy Department and discussed with Admiral O'Neil questions in which he was interested. He was interested in improving the method and expediting the manufacture of smokeless powder, and had discussed that question with Admiral O'Neil. The Government at times had two systems, one for merely drying by hot air, and the other for both drying and recovery of the solvent. Gathmann claimed a method that would do both in a very much shorter time and proposed that a test be made. The conversations between Gathmann and Admiral O'Neil, with reference to smokeless powder, had gone on for a year or more prior to March 24, 1903. On February 9, 1903, he filed in the United States Patent Office an application, serial number 142,653, for letters patent on a method of drying materials of various kinds. Having proposed that the Government experiment with the same, Gathmann, in March, 1903, submitted a drawing or working plan of the apparatus, with a description, together with an explanation of what he thought some of the advantages of his method were, to Admiral O'Neil, who examined them in connection with another officer who had technical knowledge, and indicated to Gathmann a willingness to experiment with his apparatus and process, to determine whether it would accomplish the results claimed for it. Thereafter Gathmann delivered to Admiral O'Neil, as Chief of Bureau of Ordnance, a letter, set forth in the next finding

V.

"SIR: The undersigned has made an invention, 'Method of drying materials,' for which patent has been filed Feb. 9, 1903, Series No. 142,653. Now, in consideration of the Navy Department building an apparatus for testing this method, without expense to me, I hereby give the Navy Department the option of using my method of drying materials, if they find it to their advantage, by paying to me, my heirs, or my legal representatives \$0.01 (one cent) for each pound of material dried by my method."

With said letter Gathmann caused also to be delivered a plan or drawing for such experimental, or testing apparatus.

Amiral O'Neil, as chief of said Bureau of Ordinance, replied to said letter of Louis Gathman, on March 26, 1903, as follows:

"SIR: Referring to your communication of March 24, 1903, offering the Navy Department the option of using your method of drying materials, on payment of one cent per pound on materials so dried, the bureau has to inform you that it accepts your proposition, and has ordered one experimental apparatus for drying smokeless powder, constructed in accordance with plan submitted by you. This apparatus will be tested without expense to you, and if it works satisfactorily to the bureau, the bureau agrees to pay you, your heirs, or legal representatives one cent for each pound of smokeless powder dried by the method covered by your application or applications filed or to be filed with the U. S. Patent Office, provided a patent or patents is or are issued to you therefor."

In the said explanation by Gathmann of his said method, he verbally represented to Admiral O'Neil that said method would greatly reduce the time required for the drying of the powder, and this representation furnished the chief inducement to Admiral O'Neill to enter into the agreement shown by the letters set forth above.

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VI.

Pursuant to the agreement between Admiral O'Neil and the decedent Gathmann, shown by said letters, the defendants, under the direction and supervision of Gathmann, at their own expense constructed and exhaustively tested at their Indianhead (Md.) powder plant the experimental apparatus and method so proposed by Gathmann. Said apparatus and method were substantially the same as those shown and described in said Gathmann's United States Letters Patent No. 763,387 subsequently granted to him and his assignees of a one-fourth interest upon his said application No. 142,653 of February 9, 1903. A copy of said patent is by this reference made a part of these findings of fact as Exhibit 2.

The said tests began in October, 1903, and continued until in October, 1904, during which time reports of the results obtained by the tests, comparative and otherwise, were periodically made by the

Government officer under whom the tests were being conducted, comparison of results being made with results obtained from concurrent drying operations under the regular Government method. The instructions and wishes of Gathmann in the conducting of the tests were fully complied with except in one instance, as follows: In the regular operation of the Government powder plant where the tests were conducted the plant closed down on Sundays and holidays. Before the commencement of the tests Gathmann was informed of this fact and expressed himself as satisfied with this arrangement. After the tests had continued for some time, however, and failed to show advantageous results in the saving of time he desired a continuous and unbroken operation of the apparatus. This was not acceded to by the Government authorities, as it involved additional force and expense for operation on Sundays and holidays, and the testing operations continued as before.

In said tests the time required for the drying of the powder was not reduced, nor does it appear that the former methods used and results attained by the Government in drying and solvent recovery were otherwise improved upon. The said Gathmann apparatus and method did not work satisfactorily to the Bureau of Ordnance of the Navy Department, and at the close of the tests Gathmann was so notified by a letter from the Acting Chief of Ordnance, reading as follows:

"Referring to your apparatus for drying powder, installed at the naval proving ground for trial: The bureau forwards herewith a copy of the report made by the inspector of ordnance in charge of that station for your information. After carefully considering this report the bureau is of opinion that this apparatus has failed to demonstrate anything that would warrant further experiment with it, and the bureau has instructed the inspector of ordnance in charge of the naval proving ground that, when the drier can hold no more samples the whole amount be put in the dry house until dried to the proper volatiles."

No change was made in the Government's solvent recovery and drying processes as a result of this test of Gathmann's said method.

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VII.

On June 28, 1904, there was granted to the said Louis Gathmann and assignees, upon said application No. 142,653, of February 9, 1903, his said United States patent No. 763387, set forth as Exhibit 2 to these findings. Also on said date there was granted to Gathmann and his assignees of a one-fourth interest therein, United States patent No. 763388, a copy of which is, by this reference, made a part of these findings as Exhibit 3.

Said patents and the applications upon which they were granted were the applications and patents in contemplation by the said Louis Gathmann and Admiral O'Neill in their respective letters of March 24 and March 26, 1903, set forth in Finding V.

VIII.

Beginning in the year 1907, there have been used by the Navy Department at various times, in the manufacture of smokeless powder, drying and solvent-recovery apparatuses and methods illustrated by the drawings set forth as Exhibits 4, 5, and 6 to these findings of fact, which exhibits are by this reference made a part of said findings.

Exhibit 4 illustrates an apparatus and method used beginning about May, 1907, in which a powder can, or container, a fan, a steam-coil heater, and a brine condenser were all connected by intervening pipe sections, the whole forming a closed circuit. The air was heated in the heater, driven by the fan into the powder can at the bottom, passed up through the powder in the can, absorbing solvent from the powder, then out of the top of the powder can and through the pipe into the condenser, where the solvent in the air was condensed and drawn off, the air pressing on to the heater again, to repeat the cycle.

Exhibit 5 illustrates an apparatus and method used from about August 1, 1910, to 1916, known as the box-type method, the apparatus consisting of a vertically partitioned box with a heater in one side, and a condenser, with a powder chamber above it, in the other side, and with connecting air passages at top and bottom between the two sides, or compartments, of the box, thus forming a closed circuit. Air heated by the heater passed upward and through the connecting passage over into the top of the powder compartment, then down through the powder, absorbing solvent from it on the way and descending by gravity to the condenser, where the solvent in it was condensed and drawn off, the air then passing through the connecting air passage at the bottom into the heater compartment, to repeat the cycle. In this method the circulation is gravity circulation, induced wholly by the heating and the cooling of the air in the different parts of the circuit.

Exhibit 6 illustrates an apparatus and method used since 1914, in which the method is substantially similar to the method used by the Government in 1907 (Exhibit 4), the apparatuses, however, being somewhat different in structure.

In the use by the Navy Department of the drying and solvent-recovery devices and methods described in Finding VIII there was no initial or preliminary production of a vapor-laden atmosphere in the powder chamber prior to the beginning of the circulation of the air in the circuit; there was no preliminary circulation of the air in the circuit before the reducing of the temperature and starting condensation in the condensing chamber; there was no intentional variation of the temperature in the condensing chamber; and there was no attempt to maintain a vaporous or vapor-laden atmosphere in the circuit or in the powder chamber, the effort being, on the contrary, to get all the moisture possible out of the air as it passed through the condensing chamber.

X.

The following patents and drawings show the development and prior state of the art to which the decedent's said patents, No. 763387 and No. 763388, relate:

- (1) British patent No. 1112, of 1878, to Smith.
- (2) United States patent No. 245911, of August 16, 1881, to Wood.
- (3) United States patent No. 276405, of April 24, 1883, to Ho-eveler.
- (4) British patent No. 6208, of 1887, to Sutcliffe.
- (5) United States patent No. 355559, of January 4, 1887, to Sargent.
- (6) United States patent No. 363704, of May 24, 1887, to Van Osdel.
- (7) United States patent No. 426,453, of April 29, 1890, to Morton and Andrews.
- (8) United States patent No. 430215, of June 17, 1890, to Maxim.
- (9) United States patent No. 438423, of October 14, 1890, to Peregrine.
- (10) United States patent No. 487827, of December 13, 1892, to Dion.
- (11) United States patent No. 515913, of March 6, 1894, to Larson and Bergstrom.
- (12) British patent No. 19281, of 1897, to Bergstrom.
- (13) British patent No. 30333, of 1897, to Rappold.
- (14) British patent No. 17980, of 1898, to the British Nonflam-mable Wood Co.
- (15) United States patent No. 632508, of September 5, 1899, to Allington.
- (16) British patent No. 6067, of 1899, to Vignon-Danto.
- (17) United States patent No. 653555, of July 10, 1900, to Hart and Ashworth.
- (18) United States patent No. 675070, of May 28, 1901, to Sar-gent.
- (19) United States patent No. 696989, of April 8, 1902, to Mar-shall.
- (20) The drawings constituting Exhibit 1 to these findings of fact, illustrating the apparatus and method of drying and solvent-recovery used by the Government in the year 1900.

Copies of the above patents are hereby made a part of these findings of fact as Exhibits A-1, A-2, A-3, A-4, A-5, A-6, A-7, A-8, A-9, A-10, A-11, A-12, A-13, A-14, A-15, A-16, A-17, A-18, and A-19.

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XI.

The proceedings in the Patent Office on the applications upon which decedent Gathmann's said patents No. 763387 and No. 763388 were granted are shown by certified copies of the file wrappers and contents in said applications which are by this reference made a part of these findings as Exhibit 7 and Exhibit 8, respectively.

XII.

The said Gathmann patents, No. 763387 and No. 763388, were each granted to Gathmann and his assignees of a one-fourth interest, Eldred P. Dickinson and Somerset R. Waters, of Washington, D. C., pursuant to a deed of assignment by Gathmann of February 3, 1904, conveying an undivided one-fourth interest in the inventions covered by the applications for said patents.

Said deed of assignment provided that none of the parties thereto should grant licenses, or assign any interest in said inventions and letters patent therefor, except by written consent of all the parties, nor separately enter into any business, manufacture, or trade using said inventions except by agreement signed by all the parties; and that all net profits should be divided among them in proportion to their several interests.

Conclusion of Law.

Upon the foregoing findings of fact the court decides that the plaintiff is not entitled to recover, and her petition is therefore dismissed.

Judgment is rendered against the plaintiff in favor of the United States for the cost of printing the record herein, the amount thereof to be entered by the chief clerk and collected by him according to law.

Opinion.

CAMPBELL, *Chief Justice*, delivered the opinion of the court.

The plaintiff relies upon an alleged express contract, which she claims was made between her decedent, Gathmann, and the Government, whereby the latter became bound to pay Gathmann a stipulated amount per pound of smokeless powder dried by Gathmann's method. It is averred that the Government subsequently dried large quantities of smokeless powder by the use of that method.

The facts show that Gathmann and Admiral O'Neil, the Chief of Ordinance, United States Navy, were well acquainted; that they held frequent conversations relative to ordinance matters at different times during a period of five or six years prior to the date of the

correspondence to be stated; that Gathmann was an inventor, and, among other things, had become interested in the subject of a drying process for smokeless powder. Naturally such a subject engaged the attention of the Chief of Ordinance. It appears that the grains of smokeless powder are formed by forcing a plastic mass of material, constituting the powder, through dies and cutting into short pieces the macaronilike strings which result from the forcing process. The material is in a plastic condition, or mass, because of the presence therein of an excessive amount of ether and alcohol. These elements—ether and alcohol—are called the “solvent.” As the powder in its plastic condition comes from the dies it contains about 40 per cent of the solvent, and this percentage must be reduced to between 4 and 7 per cent, according to the caliber, before the powder is ready for use. When the material is newly made or “green” the solvent begins to evaporate and is given off more rapidly than is the case after the evaporation has gone on for a time.

The ether and alcohol being expensive it is desirable to save as much of them as possible for further use. The defendant had been using one or more methods for recovering the solvent which were not satisfactory. It also used a method of drying which took a long time. Gathmann claimed to have discovered a process whereby the solvent could be saved, the time of drying greatly reduced, and thus combine into one process the two methods mentioned. He discussed his plans with the chief of bureau, who became interested in the suggestion and indicated a willingness to have the Gathmann method tested. At that time Gathmann had filed in the Patent Office his application for letters patent for “Improvement in Methods of Drying Materials.”

As a result of the discussions between Gathmann and the chief of bureau, and especially the suggestion by the former that his method would greatly reduce the time for drying powder, and the indicated willingness of the bureau to test the process, Gathmann wrote and delivered to Admiral O’Neil, as Chief of the Bureau of Ordnance, a letter reading as follows:

“SIR: The undersigned has made an invention, ‘Method of drying materials,’ for which patent has been filed Feb. 9, 1903, Series No. 142653. Now, in consideration of the Navy Department building an apparatus for testing this method, without expense to me, I hereby give the Navy Department the option of using my method of drying materials, if they find it to their advantage, by paying to me, my heirs, or my legal representatives \$0.01 (one cent) for each pound of material dried by my method.”

At the time the letter was delivered Gathmann also delivered to Admiral O’Neil a plan or drawing for the testing apparatus. Gathmann’s letter was dated March 24, 1903, and in reply to it the Chief of Bureau of Ordnance caused to be delivered to Gathmann a letter dated March 26, 1903, reading as follows:

“SIR: Referring to your communication of March 24, 1903, offering the Navy Department the option of using your method of drying materials, on payment of one cent per pound on materials so dried, the bureau has to inform you that it accepts your proposition and has ordered one experimental apparatus for drying smokeless powder,

constructed in accordance with plan submitted by you. This apparatus will be tested without expense to you, and, if it works satisfactorily to the bureau, the bureau agrees to pay you, your heirs, or legal representatives one cent for each pound of smokeless powder dried by the method covered by your application or applications filed or to be filed with the U. S. Patent Office, provided a patent or patents is or are issued to you therefor."

In the original petition in this case, brought in the name of Gathmann and sworn to by him, it is stated that the drawing
15 for an experimental apparatus, which he caused to be delivered to the Chief of the Bureau of Ordnance, was the same drawing which he had filed February 9, 1903, with his application for the patent above described. At any rate, in pursuance of the statements in Admiral O'Neil's letter, steps were taken to make a suitable test of the proposed method. The Government, under the direction of Gathmann, at its own expense constructed and tested at its powder plant at Indianhead the experimental apparatus and method which Gathmann had proposed. The experiment was exhaustive and in making it there were adopted all of the suggestions made by Gathmann except one, which was that after the experiments had continued for some time and were not producing the expected results Gathmann desired the apparatus to be operated continuously, but the Government declined to operate on Sundays and holidays because of the increased expense. Except this feature, all of Gathmann's suggestions were complied with. These experiments extended over a period of about a year, and a report was finally made to the department upon the results of the same.

Following this report the Bureau of Ordnance notified Gathmann under date of October 14, 1904, as follows:

"Referring to your apparatus for drying powder, installed at the naval proving ground for trial: The bureau forwards herewith a copy of the report made by the inspector of ordnance in charge of that station for your information. After carefully considering this report the bureau is of the opinion that this apparatus has failed to demonstrate anything that would warrant further experiment with it, and the bureau has instructed the inspector of ordnance in charge of the naval proving ground that, when the drier can hold no more samples, the whole amount be put in the dryhouse until dried to the proper volatiles."

Suit was brought in this court by petition, filed in the name of the said Gathmann, on April 17, 1915, more than ten years after the department's action in declining the proposal. An amended petition was filed July 31, 1919, in the name of the administratrix of Gathmann.

The alleged contract is predicated, in the original and amended petitions, upon the letter of Gathmann, dated March 24, 1903, and the reply thereto of the Chief of Bureau of Ordnance dated March 26, 1903.

It is manifest that the report to Gathmann of October, 1904, is an essential part of the transaction between the parties. The sub-

stance of this correspondence is that Gathmann, claiming to have invented a useful method of drying material, proposed to give the Navy Department "the option of using my method of drying materials if they find it to their advantage" in consideration of the department building an apparatus for testing without expense to him, and if found to its advantage and used by it upon paying him a stated sum per pound of material dried by his method. The reply of the department refers to the fact of Gathmann's "offering the Navy Department the option of using" his method, and informs him that it accepts his proposal, and had ordered an experimental apparatus constructed in accordance with the plan submitted by him, and it is significantly added: "This apparatus will be tested without expense to you, and if it works satisfactorily to the bureau"

16 the latter agreed to pay one cent per pound for powder dried by Gathmann's method. Subsequently, after a long and thorough test, the bureau informed him that the apparatus had failed to demonstrate anything that would warrant further experiment. There was inclosed to him a copy of the report made by the inspector of ordnance in charge of the station.

Clearly this correspondence does not amount to a contract between the Government and Gathmann. At most, a mere option was granted by Gathmann to the Government to use his method if found suitable after making a test of certain apparatus furnished by him, which he continued to improve or change. The Government, having made these experiments, notified him that his process was not satisfactory. His offer having been thus rejected, the option was at an end. The action here is to recover for an alleged use of the method beginning nearly five years after the rejection of the option. True it is that the plaintiff appears willing to accept payment on the basis of the original, but rejected, proposition, one cent per pound, but manifestly, if instead of claiming a contract the suit were for an infringement and plaintiff sought such amount as could be proven as damages the correspondence above mentioned would not protect the Government or limit the recovery to one cent per pound. There was never any agreement between the parties to use Gathmann's method, and all we have is, as has been stated, an option granted, declined, and terminated.

The instant case illustrates the importance of determining whether in fact a contract was made between the parties, because if one was made the court is not concerned with the question of the validity of the patent. When it is found that the defendant agreed to use a patented method or process, and did use it, the amount agreed upon as royalty becomes payable. But even in the latter case the claims in the letters patent are to be resorted to in order to ascertain whether the thing actually used is the thing comprehended within the fair scope of the claims.

When the letters patent issued to Gathmann (No. 763,387) are examined it is found that they refer to a "method of drying materials" and the specification points out that in this art it had been common to make use of "a closed circuit" and the necessary apparatus, and further that to avoid certain injurious consequences, which

more or less bulky materials are likely to suffer "when subjected ab initio to a vaporizing temperature," it had been proposed to start the operation "by first producing a vapor-laden atmosphere * * * by causing the air in a closed circuit" to absorb more or less steam while in circulation in said circuit, and finally this "saturated air has been blown out of the circuit and fresh ambient air taken in," the operation being repeated until the material is freed of its moisture and the latter blown off. Certain objections to this latter method are pointed out, and it is declared that "in those processes which are based upon the circulation of the drying medium in a closed circuit and the condensing of the vapors no means have been provided to produce a vapor-laden atmosphere in the drying chamber." The invention, it is declared, has for its object the combination of the two methods mentioned. It is, and claims to be, a "method" patent. The specification in Gathmann's Letters Patent admits the want of novelty in the elements of the combination; and the changes in the application through the Patent Office, as shown by the file wrapper and contents made an exhibit to the findings, show that neither the method of drying by circulating the drying medium in a closed circuit nor the downward direction of the drying current was new or had the property of novelty.

After numerous amendments the Gathmann application was again reviewed by the examiner in the Patent Office in June, 1903, who, speaking of one of the claims much insisted on by the applicant, rejected the claim because "the downward direction of the drying current is notoriously old." The fact must be conceded and accepted that a closed circuit comprising a drying chamber, a means of heating the air therein to a vaporizing temperature, a fan to cause or accelerate the circulation of the air or drying medium in circuit; a condenser to reduce the temperature of the heated air and thereby recover the solvent, or some of it, and help dry the powder, were all well known and had been in use, and the inquiry must be to ascertain what was the Gathmann method alleged to have been used by defendant. It must be disclosed in the claims in the letters patent, because these are statutory requirements prescribed for the very purpose of making the patentee define precisely what his invention is, and it is unjust to the public, as well as an evasion of the law, to construe the claim in a manner different from the plain import of its terms. *White v. Dunbar*, 119 U. S. 47, 52; but as stated in the case just cited, the context may undoubtedly be resorted to and often is resorted to for the purpose of better understanding the meaning of the claim.

The method for reducing the solvent and drying the powder which defendant was using in 1900 was by means of a closed-circuit apparatus, into which air was introduced, and was substantially as follows: The powder was placed into three separate containers, and these were connected severally by pipes to the closed circuit wherein the air was duly heated in a heating chamber and kept in circulation by a fan, thus projecting it downward through the powder containers, upon leaving which the solvent-laden air passed into a condensing chamber, where, by a sudden change of temperature, it was

relieved of its solvent vapors, or parts thereof, and the air passed on for a repeated circuit of the same kind of operation. This method of evaporating and saving a material portion of the ether and alcohol constituting the solvent was continued in use for perhaps a year, when it was abandoned on account of excessive leakage in the pipes caused by the great number of connecting joints necessarily employed in joining the various parts of the apparatus together to form the closed circuit.

The defendant used different devices after the one just mentioned, and if it be assumed that there was a contract between the parties the question would still be, did it use Gathmann's method?

Claim one of the letters patents calls for "Producing a vapor-laden atmosphere in a space containing the substance to be dried," and causing this vapor-laden atmosphere "to flow downwardly through said space," maintaining the circulation until the atmosphere is saturated with vapor, and then by lowering the temperature of said atmosphere during its passage to cause a condensation and a consequent saving of the solvent. There is under this method an exclusion of ambient air. The method so described was to be effectuated

18 by heating the powder so that the atmosphere above it in the powder chamber would become vapor-laden from the evaporation of the alcohol and ether in the powder mass.

This being accomplished, the vapor-laden atmosphere was caused to pass downward through the powder to the lower level, where the condensation occurs, as has been stated, and it then passed on in the closed circuit to where it was taken up by the fan and projected into a heating device, whence it repeated its tour of the closed circuit. It was claimed that this method saved considerable amounts of the solvent as well as dried the powder quicker and to a more even degree. Gathmann claimed that by first obtaining a vapor-laden atmosphere in the space occupied by the powder to be dried he thereby maintained throughout its subsequent journeys in the closed circuit a degree of uncondensed volatiles within the said atmosphere which kept the powder moist, thus preventing a surface crust and drying it more thoroughly and evenly. Claim one, then, is limited, by reference to the claim and specification, to producing a vapor-laden atmosphere in the space occupied by the powder—the powder chamber. The defendant never at any time used such a method.

Claim two is much broader than claim one, and, unless read in connection with and in the light of the specification, comes within one or more of the rejections interposed by the Patent Office to some of the numerous amendments offered while the application was in that office; and further, unless so read, the claim amounts to nothing more than what the specification declares at its outset, "it has been common to make use of." Either of those conditions is to be avoided in construing the claim.

The specification mentions two familiar processes and that in neither of them has means been provided "to produce a vapor-laden atmosphere in the drying chamber." It declares that the "invention has for its object the combination of two described methods," so improved as that "a substantially vapor-saturated atmosphere in the drying chamber" is maintained nearly to the end of the drying

process. One of the principal advantages supposed to flow from the process was that the vapor-laden atmosphere would prevent the outside of the grains of powder from becoming encrusted and dried, while the interior of the grain maintained a large amount of moisture.

Continuing its description, the specification describes the operation of the apparatus by reference to certain drawings, and states that after the substance to be dried has been placed in the drying chamber and "the latter closed and cut out of the circuit by closing" a designated valve, "a vapor-saturated atmosphere is produced in the drying chamber," which, it is stated, may be done in various ways. These ways are, first, by supplying heat to the heater condenser located under the drying chamber and heating the substance to be dried and the air in the drying chamber until the air has become saturated, "or, in other words, to have reached the dew point," and in the meantime heat is being applied to the heater located on the opposite side of the apparatus from the drying chamber, and having for its purpose the supplying of heat to the atmosphere when the circulation through the closed circuit proceeds; or, second, by heating the substance to be dried until the air "confined in the drying chamber is more or less laden with vapor," and then re-establishing the circulation until the air "becomes saturated with vapor, or, in other words, has reached the dew point;" or
19 thirdly, by proceeding as described under first or second, and also injecting steam "into the drying chamber."

While thus describing his process, the claims two, three, and four are for methods of drying in which an atmosphere "saturated with vapor" is produced before condensation is allowed to set in, the difference in the three claims consisting principally in the time and place of producing the saturated atmosphere. In claim two the circulation is started and continued until there is a saturated atmosphere; in claim three the drying medium is treated "while confined in the space containing the substance to be dried," and then starting a circulation which is maintained until the drying medium is "saturated with vapor," then reduced and condensed to an extent; and in claim four the drying medium is heated to a vaporizing temperature while confined in the drying chamber, then the "so-heated medium" is set in motion and allowed to condense on a lower level.

The medium which is thus heated to a vaporizing temperature while confined in the drying chamber (according to claim four) is heated to a vaporizing temperature while in circulation (according to claim two); and in claim two the circulation is maintained until the drying medium "is saturated with vapor." Then, and not until then, is any condensation allowed to take place. The specification and claim two, alike, call for a vapor-saturated atmosphere and the claim can not be read so broadly as to cover methods which omit some of its essential elements. The defendant's box-type method used in 1910, or subsequently, did not seek to create or maintain an atmosphere saturated with vapor, or to cause the heated air to be fully or partially saturated with vapor when it entered the drying

chamber. In the Government's method there was no attempt to limit or to regulate the extent of condensation in order to maintain a saturated atmosphere. On the contrary, its method had the purpose of extracting all the solvent that could be extracted, as and when the medium passed through the condenser.

If, therefore, it be assumed that there were contractual relations between the parties, it can not be said that the Government used plaintiff's method of drying powder. But, as already stated, there was no contract after the rejection of Gathmann's proposal.

The petition should be dismissed. And it is so ordered.

Graham, Judge; Hay, Judge; and Downey, Judge, concur.

BOOTH, *Judge*, dissenting:

The allegations of the petition in this case disclose a suit founded upon an express contract to pay royalties for the use of a patented method for drying smokeless powder. In describing the various steps of a detailed method, claimed as original, it is difficult to make it clear, apart from the apparatus employed to effectuate it, especially so where the method claimed is so slight a deviation from ones of a similar character long in use. Smokeless powder grains vary in size and are formed "from a soft, plastic mass which owes its condition to a considerable content of alcohol and ether, this combination of fluids being familiarly referred to as the 'solvent.'" The plastic mass thus formed is forced through a perforated die, resulting in long strips of the same, similar to "macaroni." After cutting said strips into the desired lengths it becomes indispensable to
20 reduce the solvent in the powder from 40 to at least 5 or 6 per cent. This is accomplished by a drying process. To dry the powder and reduce the ether-alcohol solvent is manifestly free from much difficulty, involving at best a considerable length of time and the wasting of the ether-alcohol solvent, but to dry the powder quickly, reduce the solvent, and save a large percentage of the latter for future use, involves the exercise of the inventive genius. To this particular phase of the matter the plaintiff directed his especial attention.

The specifications and various claims of the patents in suit, if I correctly apprehend them, cover a single novel conception in this particular art. I say this because of the express disclaimer set forth in the second paragraph of plaintiff's Letters Patent No. 763,387, wherein express recognition is acknowledged of previous and used methods, differing only from the patentee's method in this one particular feature and which we believe to be further confirmed by the long and somewhat tedious passing of the claims to patent by the Patent Office. Starting, then, with the conceded fact that a closed circuit comprising a drying chamber, a means of heating the air therein to a vaporizing temperature; likewise a fan to cause the circulation of the heated air in the circuit, as well as a condenser employed to reduce the temperature of said heated air and thereby recover the ether-alcohol solvent and dry the powder, were in use and well known, the issue is somewhat simplified by ascertaining

from the record in what particular did the plaintiff change this established method in a way that is new and novel, for which he was granted letters patent, and which, in so far as this suit is concerned, is fully covered and protected by the same. In other words, what is his patented method?

The officers of the defendant had not been idle, nor had previous inventors failed to recognize the necessity for a method of accomplishing the very purpose the plaintiff set out to accomplish, and this is made more emphatic by the long list of patents set out in Finding X depicting the state of the art.

Resorting first to the claims of the plaintiff's letters which in law are required "for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms" (*White v. Dunbar*, 119 U. S., 47, 52), and then contrasting and comparing them with the prior state of the art, fixes the scope of the invention granted in the Letters Patent, as well as positively identifying the real invention.

The defendant in 1900 was using a method for reducing the ether-alcohol solvent and drying smokeless powder which consisted of the introduction of atmosphere into a closed circuit apparatus erected by a combination of the following parts. The powder was deposited into three separate powder containers connected respectively by pipes to the closed circuit, in which the atmosphere was duly heated in a heating chamber, and kept in circulation by a fan, thus projected downwardly through the powder chambers, after leaving which the solvent-laden air passed into a condensing chamber, where by the sudden change of temperature it was relieved of its solvent vapors, the ether and alcohol collected, and the air passed on for a repeated circuit of the same operation. This method of evaporating and saving a material portion of the ether-alcohol

21 content of the powder was continued for about, or perhaps, a year's time, when it was abandoned on account of excessive leakage in the pipes caused by the great number of connecting joints, necessary to join the various parts of the apparatus together in forming the closed circuit. Thereafter, so far as the record discloses, the defendant accomplished nothing of material value in evolving an efficient method until subsequent to 1903, when the plaintiff submitted his method.

Claims one of plaintiff's Letters Patent describe a predominating feature which differentiates it from the method employed by the Government prior to this time, and seems to me to define the scope and identity of his patented method covered by said claims, which, in so far as these claims are concerned, sets forth the real invention. It is, to use in part the language of the claims, "producing a vapor-laden atmosphere in a space containing substance to be dried," and then by the same processes heretofore described, starting and continuing the circulation of said vapor-laden atmosphere until the same "is saturated with vapor," under the exclusion of ambient air, after which it is condensed in the cooling temperature of the condensing chamber, and the solvent saved. The method so described

was effectuated by introducing in the bottom of the powder container a coil capable of being used as both a cooling and a heating device. With this device used first as a heater—the plaintiff says “condenser heater”—the powder is heated and the atmosphere above being confined to the powder chamber, becomes vapor laden. After the atmosphere becomes thus vapor laden the device used to confine it in the powder chamber is released, and the same is caused to pass downwardly through the powder into a space on a lower level, the condenser heater having in the meantime been converted from a heating to a cooling coil, whereby the vapor-laden atmosphere is relieved of a part of its vapor, then passed on in the closed circuit to a point where a fan takes it up, projecting it into a second heating device, thus restoring its lost heat, after which it again proceeds to the powder chamber, to repeat its tour of the closed circuit. The claimed merit of the method is said to be an appreciable saving of the solvents, as well as the drying of the powder to an even degree throughout its entire bulk. The plaintiff insists that by first obtaining a vapor-laden atmosphere in the space occupied by the powder to be dried, he thereby maintained throughout the subsequent journeys of said atmosphere around the closed circuit a certain degree of uncondensed volatiles within said atmosphere which kept the powder moist, and prevented a surface crust thereon, drying it from the inside out, and thus effecting a larger condensation of the ether and alcohol, which had not theretofore been done without the admission of ambient air to the closed circuit. Claim one, then, as I view it, is limited by reference to the claim and specifications to the creation of a vapor-laden atmosphere in the space occupied by the powder, i. e., the powder chamber. It obviously could not be otherwise and attain the dignity of invention. The defendant never at any time used the method covered by claim one.

This conclusion is rested upon what claim 1 discloses as the primary conception of the inventor, for which novelty is claimed, and certainly can not be extended to include more than an alleged original method whereby a vapor-laden atmosphere is first brought into being inside the space occupied by the powder and continued in circulation until it becomes saturated, so as not to at any time condense the full proportion of the ether-alcohol solvent, thus retaining sufficient quantity of the solvent in the atmosphere to maintain the necessary degree of moisture in the powder itself to prevent crustation. The inventor by express language sustains the same by himself specifying provisions for introducing outside vapors, if necessary, to sustain this very atmospheric condition.

Claim 2 of the plaintiff's method, as appears from Letters Patent No. 763,387, is much broader, and when read in connection with the method used by the defendant from 1910 to 1916, known as the “box type,” seems to so clearly approach it that their identity becomes merged. Treating the invention relied upon by the plaintiff as strictly a method patent, it would be difficult indeed to differentiate the method employed by the defendant from the one described in claim 2. Claim 2 is not ambiguous; the language of the claim is

obviously free from need of construction to ascertain the meaning of the same, and, inasmuch as the case is concededly a contract one, its validity is not involved. The Patent Office passed the claim; it is broad and comprehends the very method employed by the defendant to attain the results attained by the "box type" device. The "box type" device, as to two features, is conceded in the defendant's brief to anticipate claim 2 of plaintiff's patent, and the defendant's expert witness accurately portrays the method in language so decidedly apt as to warrant the conclusion that the methods are identical. The machines were decidedly different; the method seems identical. In the "box type" device the atmosphere is first heated to a vaporizing temperature, passes into the top of the box or powder chamber, where it comes into contact with powder and becomes saturated with the ether-alcohol solvent, and it then passes downward through the powder, through the condensing chamber into a chamber on a lower level where it is relieved of a portion of the solvent, and then up again to the heating chamber, restoring its lost heat, whereupon the process is repeated to the exclusion of ambient air. This method was used by the defendant from 1910 to 1916. *Harvey Steel Co. v. United States*, 196 U. S., 310.

The letter of March 26, 1903, from Admiral O'Neil to the plaintiff, as set forth in Finding V, precludes the denial of an existing contract between the parties if the plaintiff met all the conditions of the same. It seems to me that the Government is put in the rather awkward situation of seeking to repudiate a contract to pay for the use of a patented invention "if it works satisfactorily to the bureau," because the findings specifically disclose that after various experimentations they returned in the end to the use of the apparatus disclosed in claim 2 to them by the plaintiff and which was, in the first instance, of sufficient importance to excite their immediate attention and interest. The only issue presented for our determination, as held in the case of *United States v. Harvey Steel Co.*, *supra*, is whether the defendant used the invention covered by the plaintiff's letters patent, and the only purpose of going into the prior art is to ascertain what the invention was.

For the reasons above stated I am unable to agree with the opinion of the court, but am firmly convinced that the plaintiff is entitled to recover.

VI. Judgment of the Court.

At a Court of Claims held in the City of Washington on the Thirty-first day of May, A. D., 1921, judgment was ordered to be entered as follows:

The Court, upon due consideration of the premises find in favor of the defendant, and do order, adjudge and decree that Olga Gathmann, administratrix of the estate of Louis Gathmann, deceased, as aforesaid, is not entitled to recover and shall not have and recover any sum in this action of and from the United States; and that the petition herein be and the same is hereby dismissed: And it is

further ordered, adjudged and decreed that the defendant shall have and recover of and from the plaintiff, as aforesaid, the sum of One hundred and forty dollars and forty cents (\$140.40) the cost of printing the record in this court, to be collected by the Clerk, as provided by law.

By THE COURT.

VII. *Proceedings After Entry of Judgment.*

On June 27, 1921, plaintiff made a motion to amend the findings of fact. This motion was overruled by the Court on October 10, 1921.

VIII. *Plaintiff's Application for and Allowance of Appeal.*

The claimant hereby applies for an appeal to the Supreme Court of the United States.

DUDLEY & MICHENER,
Attorneys of Record.

CHARLES J. PENCE,
Of Counsel.

Filed Oct. 17, 1921.

Ordered: That the above appeal be allowed as prayed for.
October 17, 1921.

By THE COURT.

24

Court of Claims.

No. 33052.

OLGA GATHMANN FOLEY, Administratrix of the Estate of Louis
Gathmann, Deceased,

vs.

THE UNITED STATES.

I, F. C. Kleinschmidt, Assistant Clerk Court of Claims, certify that the foregoing are true transcripts of the pleadings in the above-entitled cause; of the argument and submission of case; of the findings of fact, conclusion of law, opinion of the Court by Campbell, Ch. J., and of the dissenting opinion by Booth, J.; of the judgment of the Court; of the plaintiff's application for and the allowance of an appeal to the Supreme Court of the United States.

In testimony whereof I have hereunto set my hand and affixed the seal of said Court at Washington City this 27th day of October, A. D., 1921.

[Seal of the Court of Claims.]

F. C. KLEINSCHMIDT,
Assistant Clerk Court of Claims.

Endorsed on cover: File No. 28,556. Court of Claims. Term No. 601. Olga Gathmann Foley, administratrix of the estate of Louis Gathmann, deceased, appellant, vs. The United States. Filed October 29th, 1921. File No. 28,556.

(5388)

DEC 18 1922

WM. E. STANSBURY

Supreme Court of the United States

October Term, 1922.

No. 203.

OLGA GATHMANN FOLEY, Administratrix of the
Estate of LOUIS GATHMANN, deceased,

Appellant,

vs.

THE UNITED STATES.

Appeal from the Court of Claims.

APPELLANT'S BRIEF.

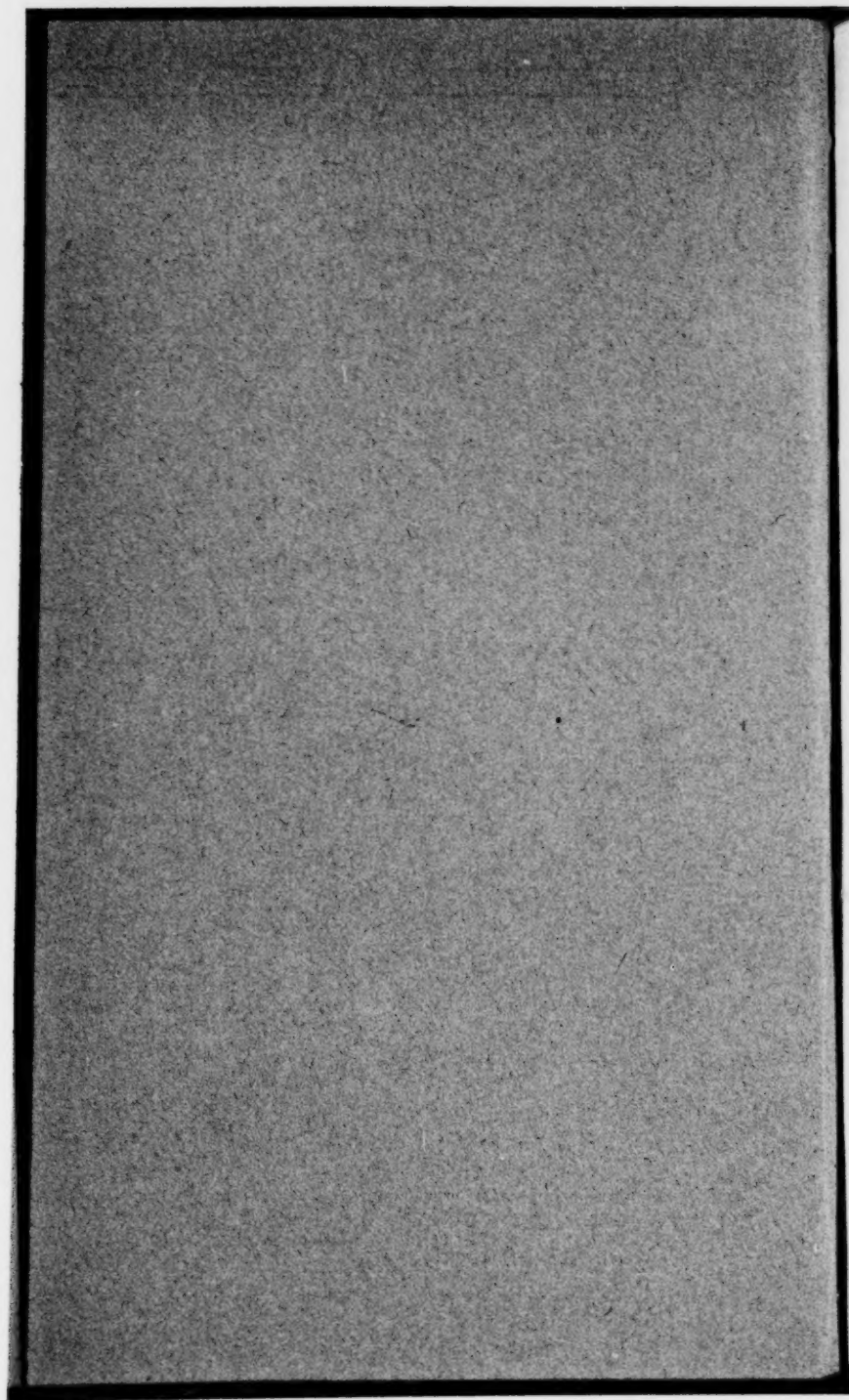
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P. G. MICHENER,

Of Counsel.



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**SUPREME COURT OF THE STATE OF
NEW YORK**

OCTOBER TERM, 1922.

OLGA GATHMANN FOLEY, AD-
MINISTRATRIX OF THE ESTATE
OF LOUIS GATHMANN, DE-
CEASED, APPELLANT,

v.

THE UNITED STATES.

No. 203.

APPEAL FROM THE COURT OF CLAIMS.

APPELLANT'S BRIEF.

1.

OUTLINE OF THE RECORD.

The action was filed in the Court below by Louis Gathmann, the inventor, April 17, 1915, and the Administratrix of his estate filed the amended petition July 31, 1919 (R. 1). The amended petition is based on the two letters copied on p. 2 of the Record, and the subsequent use by the United States of Mr. Gathmann's patented method of drying materials used in the making of smokeless powder, such use being at the powder works of the United States at Indian

Head, Maryland, from April 17, 1909, to April 17, 1915 (R. 2, 3).

The case was tried in December, 1919, and was argued on tentative findings in May, 1920. Findings of fact and opinions were filed and judgment entered dismissing the petition May 31, 1921 (R. 4-21).

Appellant moved to amend the findings June 27, 1921, but the Court overruled the motion October 10, 1921, and appellant took an appeal to this Court (R. 22).

The opinion of the Court was rendered by Campbell, C. J. (R. 11-18) but Judge Booth filed a dissenting opinion (R. 18-21).

The purpose of the action was to recover an agreed royalty on the amount of powder produced by the United States, if it used in the manufacture the patented inventions of Mr. Gathmann, and it is alleged that the United States did use those inventions, and did produce large quantities of powder (R. 1-3).

The facts will be discussed under another heading.

ASSIGNMENTS OF ERROR.

The Court below erred as follows:

1. In dismissing the petition and rendering judgment against the appellant.
2. In holding, on the facts found, that the appellant was not entitled to recover.
3. In holding that there was not an express contract license.
4. In considering what was said before the execution of the express contract license.
5. In considering the development and state of the art prior to the issuance of the patents.

6. In not rendering judgment in favor of the appellant on the facts found.

THE FACTS STATED AND DISCUSSED.

1. The drying of materials by the United States in its manufacture of smokeless powder prior to 1903 is described in Findings 2 and 3 (R. 5, 6).

Mr. Gathmann, an experienced inventor, had frequently discussed with the then Chief of Ordnance, Navy Department, the subject of improving the method of drying materials for smokeless powder, and February 9, 1903, he filed in the United States Patent Office an application, serial number 142,653, for letters patent on a method of drying materials of various kinds, and March 24, 1903, he delivered to the Chief of Ordnance the letter copied in full in the petition, p. 2 of the Record, the body only being copied in the findings (R. 7).

Two days later, March 26, 1903, the Chief of Ordnance wrote Mr. Gathmann the letter copied in full in the petition (R. 2) only the body of the letter being copied in the findings (R. 7).

We have copied both letters in full in our law argument for the convenience of the Court.

Mr. Gathmann, also, applied on the 22d day of January, 1904, to the United States Patent Office, serial number 790,224, for a patent covering a method of drying substances (R. 3, 6, 7, 8). On June 28, 1904, there was granted to him patents on both applications named, the patents being No. 763,387 and No. 763,388, and are made Exhibits 2 and 3 by the findings (R. foot of p. 8).

2. Tests were made at Indian Head, by the Ordnance Bureau, of Mr. Gathmann's patented apparatus and methods proposed by him in his letter, but the

Court finds that they "did not work satisfactorily" to the Bureau of Ordnance and thereupon the Acting Chief of that Bureau wrote Mr. Gathmann a letter, the body of which is copied in the findings (R. 8). The date of that letter is stated in the opinion (R. 13) as being October 4, 1904.

3. In the findings (R. 5, 9) the Court identifies certain drawings as Exhibits 1, 4, 5 and 6, and in Finding 8 (R. 9) there is described the use by the United States of the apparatuses and methods described in drawings, Exhibits Nos. 4, 5 and 6, beginning in 1907 and "to 1916."

We submit and hope to demonstrate that such use was but the use, beginning in 1907, of inventions covered by Mr. Gathmann's patents, Exhibits 2 and 3.

4. Finding 9 (R. 9) is of the negative character, and its purpose seems to be to furnish support to the previous finding in some way.

5. Finding 10 (R. 10, 11) makes exhibits of 19 foreign and domestic patents "showing the development and prior state of the art to which decedent's said patents, No. 763,387 and No. 763,388, relate"; also, the finding states that the drawings constituting Exhibit 1, mentioned first in Finding 3 (R. 5) illustrate the "apparatus and method of drying and solvent-recovery used by the Government in the year 1900." Finding 11 (R. 11) makes Exhibits 7 and 8 cover the file wrappers and contents in Mr. Gathmann's two applications for patent. Concerning these two findings we submit that the documents and papers mentioned in them are immaterial, irrelevant and not pertinent here. This is not an infringement case, but it is one founded on express contract—contract license, as we hope to establish in our law argument.

6. Finding 12 (R. 11) is to the effect that Mr. Gathmann on February 3, 1904, about ten months after making the agreement in writing with the Government, of February 3, 1903, by deed of assignment had conveyed an undivided one-fourth interest in the inventions covered by the two patents and had agreed not to grant licenses or assign any interest in the inventions and patents, except by written consent of all parties, and so forth.

Concerning this finding we submit:

(a) The deed was made about ten months *after* the contract license here sued on was made.

(b) The facts as found are wholly irrelevant and immaterial and are not pertinent here.

7. The Supreme Court takes judicial notice of the law of physics that when heated air comes in contact with alcohol or ether they become vapor and the air becomes vapor laden instantly. And where there is a considerable quantity of alcohol or ether in a closed space, such as the forty per cent of such solvents in green powder, the heated air will quickly become saturated with such vapors and reach the "dew point," as it is called. That is to say: such vapor saturated air coming into contact with a cold surface causes the vapors to return to a liquid form. It is the application of this law to the removal of such solvents from green powder that forms the basis of Gathmann's patents. The removal of the moisture from a substance is, of course, a drying process.

The only question for the Court to determine was whether the processes used by the defendant included one or more of the thirteen claims allowed in the plaintiff's patents. That Gathmann's method of drying powder was used by the defendant appears clearly by reading the description in Finding VIII (R. 9) of

the method used by the Government beginning in May, 1907 (Exhibit 4), in August, 1910 (Exhibit 5), and in 1914 (Exhibit 6), and comparing it with Gathmann's method as described in Claims 1, 2, 3 and 4 of Patent No. 763,387, and in Claims 1 and 2 of Patent No. 763,388.

As stated in Finding II (R. 5), the "green" powder contains about 40 per cent of alcohol and ether, called the solvent. And, as there also stated, "in operation the warm air from the heating chamber passes on to the powder chamber where it absorbs solvent from the 'green' powder, then passes on to the condensing chamber where the solvent carried by it is condensed to liquid form, the air then passing on to the heating chamber again for reheating and repetition of the cycle." This was the system or method established by the defendant in 1907 and on a larger scale in 1914, the "box type" method used from 1910 until 1916 applying the same principle but depending upon gravity instead of fans to cause the circulation of the heated air through the powder. It would seem to make little, if any, difference whether the heated air pass downward or upward through the green powder, the only requisite being the contact of the heated air with the substance containing the volatile solvent so that the air might carry the vapors into the cooling chamber where the vapors might change to liquid form and be drawn off. We are not informed by the findings how many minutes, hours or days were required to reduce the percentage of solvents from 40 per cent down to the desired 8 or 10 per cent when the powder is removed from the solvent recovery drier and exposed to currents of open air, but it is a matter of a number of days, covering Sundays and holidays. It is apparent that one of the mistakes of the defendant, and others perhaps, which

caused their failure in experimenting with a similar method in 1900, was in failing to use what Gathmann's method repeatedly and uniformly emphasizes, viz: not only a closed circuit, but the *exclusion of ambient* air until the treatment is ended.

The Court of Claims did not have jurisdiction in the case to determine that the Patent Office should not have granted these two patents to Gathmann. In effect this is done when it is held that the thirteen claims must be so construed as to describe something new to the state of the art. This not being an action for infringement, but being based upon an express contract, all the Court of Claims had the power to do was to read the thirteen claims granted by the Patent Office in these two patents and determine whether any one of them described the processes used by the defendant. Nor is it a fair consideration of the case to select some obscure or technical feature in one or more of the thirteen claims to be compared with the defendant's process to the exclusion of others of the claims which describe almost *verbatim* the method used by the defendant. It is true that Gathmann was granted some features which it is not claimed the defendant used, such as the saving separately the several solvents in the order of their boiling points. Another claim granted him was, if he desired to so construct a drying apparatus by having certain valves and combined heating and cooling attachment, he could heat the contents of the powder chamber before connecting it with the rest of the circuit. This is Claim 5 of Patent No. 763,388; but this was only one of thirteen claims. This separate heating is not mentioned in the other claims.

We submit that the fair way to determine whether the defendant's method of drying powder came within any of the thirteen claims allowed Gath-

mann is to get a clear understanding of the defendant's system and then read those of the claims allowed in the patents which we say include the defendant's operations.

One of the errors of the Court of Claims which resulted in the decision adverse to plaintiff was in failing to note or remember that when heated air comes in contact with alcohol or ether it becomes laden with their vapors—not instantly saturated to the "dew point," but *vapor laden*. In the main opinion, at page 16 of Record, after describing what it calls "Claim One of the letters patent," the Court concludes as follows: "Claim One, then, is limited * * * to producing a vapor laden atmosphere in the space occupied by the powder, the powder chamber. *The defendant never at any time used such a method.*" Of course this is not correct, for the several methods used by the defendant are described in Finding 8, and in each of them it appears that heated air is brought into contact with the green powder and, either by fan or gravity, caused to pass through it repeatedly and continuously in a closed circuit. Of course this contact of the heated air with the alcohol and ether caused the air to become vapor laden whether the defendant wished it or not.

The only part of the findings even hinting that Gathmann's method was not used is found in Finding 9. We consider the parts of this finding in their order:

After describing the devices and methods used by the defendant (Finding 8) the Court below, in Finding 9 (page 9 of Record) finds:

1st, "There was no initial or preliminary production of a vapor laden atmosphere in the powder chamber prior to the beginning of the circulation of the air

in the circuit." In answer we repeat that only one of the thirteen claims allowed in the patents (Claim 5 of Patent No. 763,388) suggests such initial or preliminary production of a vapor laden atmosphere in the powder chamber before connecting it with the other parts of the circuit.

2nd: "There was no preliminary circulation of the air in the circuit before the reducing of the temperature and starting condensation in the condensing chamber." In answer we say that neither is such preliminary circulation provided for in any of the Gathmann claims unless it be in Claim 5 of Patent No. 763,388, and even there it is only permissible if desired, but not essential.

3rd: "And there was no attempt to maintain a vaporous or vapor-laden atmosphere in the circuit or in the powder chamber, the effort being, on the contrary, to get all the moisture possible out of the air as it passed through the condensing chamber." In answer we say again it was not a matter of "attempt." It was inevitable that a vaporous and vapor-laden atmosphere would be created the instant the heated air came in contact with the green powder, and would continue vaporous and vapor laden until all the alcohol and ether were extracted from the powder or the powder be removed from the drier.

The only other finding (apart from the opinions) which purports to be adverse to the plaintiff is found in the closing paragraph of Finding 6 (R. 8), where, after referring to an interrupted and unsatisfactory test in 1903 and 1904 of the apparatus constructed by Gathmann, the Court finds: "No change was made in the Government's solvent recovery processes *as a result of this test.*" (Italics not in original.) Whether as a result of that test or because of further

study is not important. When in 1907, 1910 and 1914 the defendant adopted Gathmann's methods it became liable under the contract. Gathmann had not withdrawn or cancelled his proposal of March 24, 1903, and the patents still being alive the defendant would certainly become liable as soon as it began making use of the method, no matter how long it saw fit to postpone resuming or beginning its use.

For the convenience of this Court in considering what we submit is clearly shown by the record, viz: That Gathmann's method was used by the defendant, we print here together the description of the defendant's processes as found in Finding 8, and five of the claims allowed in Gathmann's patents which especially apply and clearly include the processes used by the defendant.

FINDING 8. "Beginning in the year 1907, there have been used by the Navy Department at various times, in the manufacture of smokeless powder, drying and solvent-recovery apparatus and methods illustrated by the drawings set forth as Exhibits 4, 5 and 6 to these findings of fact, which exhibits are by this reference made a part of said findings.

"Exhibit 4 illustrates an apparatus and method used beginning about May, 1907, in which a powder can, or container, a fan, a steamcoil heater, and a brine condenser were all connected by intervening pipe sections, the whole forming a closed circuit. The air was heated in the heater, driven by the fan into the powder can at the bottom, passed up through the powder in the can, absorbing solvent from the powder, then out of the top of the powder can and through the pipe into the condenser, where the solvent in the air was condensed and drawn off, the air pressing on to the heater again, to repeat the cycle.

"Exhibit 5 illustrates an apparatus and method used from about August 1, 1910, to 1916, known as the box-type method, the apparatus consisting of a vertically partitioned box with a heater in one side and a condenser, with a powder chamber above it, in the other side, and with connecting air passages at top and bottom between the two sides, or compartments, of the box, thus forming a closed circuit. Air heated by the heater passed upward and through the connecting passage over into the top of the powder compartment, then down through the powder, absorbing solvent from it on the way and descending by gravity to the condenser, where the solvent in it was condensed and drawn off, the air then passing through the connecting air passage at the bottom into the heater compartment, to repeat the cycle. In this method the circulation is gravity circulation, induced wholly by the heating and the cooling of the air in the different parts of the circuit.

"Exhibit 6 illustrates an apparatus and method used since 1914, in which the method is substantially similar to the method used by the Government in 1917 (Exhibit 4), the apparatuses, however, being somewhat different in structure."

CLAIM 1 of Patent No. 763,387. "Producing a vapor-laden atmosphere in a space containing the substance to be dried, causing the vapor-laden atmosphere to flow downwardly through said space and through a space on a lower level and back again to the first-named space, heating the atmosphere to a vaporizing temperature during circulation, maintaining the circulation until the atmosphere is saturated with vapor, then lowering the temperature of said atmosphere during its passage through the space on the lower level to a condensing temperature, restoring the lost heat to the atmosphere after it has left said lower space, and

continuing these operations, under exclusion of ambient air, until the substance is substantially free from vaporizable matter, for the purposes set forth."

CLAIM 2 of Patent No. 763,387. "The method of drying, which consists in causing a drying medium to flow downwardly through a space containing the substance to be dried and through a second space on a lower level and back to the upper part of the first-named space, heating the said medium to a vaporizing temperature while in circulation, maintaining the latter until the medium is saturated with vapor, then reducing the temperature of the saturated medium to a condensing temperature during its passage through the space on a lower level, restoring the lost heat to the medium after it has left the last-named space, and continuing these operations under exclusion of ambient air until the substance to be dried is substantially free from vaporizable matter, for the purposes set forth."

CLAIM 4 of Patent No. 763,387. "The method of drying, which consists in first heating a drying medium to a vaporizing temperature while confined in a space containing the substance to be dried, then causing the so-heated medium to flow downwardly through said space and thence through a space on a lower level and back to the upper part of the first-named space, reducing the temperature of the medium to a condensing temperature during its passage through said space on a lower level, restoring the lost heat to the medium during its passage through the space containing the substance to be dried, and maintaining these operations until said substance is substantially free from vaporizable matter, for the purposes set forth."

CLAIM 1 of Patent No. 763,388. "The method of drying which consists in first forming a vaporous at-

mosphere in a space containing the substance or material to be dried, then causing said atmosphere to continuously flow from said space through a second space and back to the first-named space, heating the atmosphere, while in circulation, to a vaporizing temperature, then reducing the temperature of the atmosphere during its passage through said second space, restoring the lost heat and regulating the condensation to maintain the atmosphere in a vaporous condition until the substance or material to be dried has been freed from a portion of its vaporizable matter, then condensing the vapors, and effecting these operations under exclusion of ambient air, for the purposes set forth."

CLAIM 2 of Patent No. 763,388. "The method of drying, which consists in first forming a vapor saturated atmosphere in a space containing the substance or material to be dried, then causing said atmosphere to continuously flow from said space through a second space and back to the first-named space, reducing the temperature of the atmosphere during its passage through said second space to a condensing temperature, restoring the lost heat to the atmosphere after it has left said second space, regulating the condensation to maintain the atmosphere in a vaporous condition until the substance or material to be dried has been freed from a portion of its vaporizable matter, then condensing the vapors and effecting these operations under exclusion of ambient air, for the purposes set forth."

As pointed out in the dissenting opinion of Justice Booth, it was not necessary for the defendant to use a fan to force the air through the circuit, to bring the process within the scope of Gathmann's patents.

We submit that the facts found show that the Government used the patented inventions.

LAW POINTS DISCUSSED.

1. Mr. Gathmann's letter of March 24, 1903, and the letter of the Chief of the Bureau of Ordnance, dated March 26, 1903, formed an express contract.

2. The word "option" in those letters is the legal equivalent of "right" or "privilege."

3. Those letters made an express contract of license for the full term of the patents.

4. The license could not be renounced, or ended in any manner, except by mutual consent or the fault of Mr. Gathmann.

5. Mr. Gathmann, after the receipt of the letter of October 14, 1904, had the right to regard the license as still in force and to sue for the unpaid royalties, the Government having used his inventions thereafter.

6. The Court below should not have considered what was said by Mr. Gathmann and the Chief of the Bureau of Ordnance prior to the writing of the letters of March 26 and 28, 1903.

7. The Court below should not have considered the development and state of the art prior to the issuance of the patents.

8. The licensee is estopped to deny the validity of the patents.

LAW ARGUMENT.

I.

Mr. Gathmann's letter of March 24, 1903, and the letter of the chief of the Bureau of Ordnance, dated March 26, 1903, formed an express contract.

We copy those letters for the convenience of the Court:

"1839 Vernon Ave. N. W.,
Washington, D. C., March 24, 1903.

Sir: The undersigned has made an invention, 'Method of drying materials,' for which patent has been filed Feb. 9, 1903, series No. 142,653.

Now, in consideration of the Navy Department building an apparatus for testing this method, without expense to me, I hereby give the Navy Department the option of using my method of drying materials, if they find it to their advantage, by paying to me, my heirs, or my legal representatives, \$0.01 (one cent) for each pound of material dried by my method.

Very respectfully,
LOUIS GATHMANN.

ADMIRAL O'NEIL,
Chief of Bureau of Ordnance."

"Navy Department,
Bureau of Ordnance,
Washington, D. C., March 26th, 1903.

Sir: Referring to your communication of March 24, 1903, offering the Navy Department the option of using your method of drying materials, on payment of one cent per pound on materials so dried:

1. The bureau has to inform you that it accepts your proposition and has ordered one ex-

perimental apparatus for drying smokeless powder, constructed in accordance with plans submitted by you. This apparatus will be tested without expense to you, and, if it works satisfactorily to the bureau, the bureau agrees to pay you, your heirs, or legal representatives, one cent for each pound of smokeless powder dried by the method covered by your application or applications filed or to be filed with the U. S. Patent Office, provided a patent or patents is or are issued to you therefor.

Respectfully,
CHARLES O'NEIL,
Chief of Bureau of Ordnance.

MR. LOUIS GATHMANN,
#1839 Vernon Avenue, Washington, D. C."

It is elementary that an express contract is one made in distinct and explicit language, or by writing; as distinguished from an implied contract.

2 Kent's Comm., 450.

Here there was an offer and an acceptance of it by a letter duly posted, thus making the contract complete.

United States v. Burns, 12 Wall. 246, 247, 251, 252.

The findings of fact show that the contract in writing was then put in performance by the parties and we submit that they show, also, that the Government, after October 14, 1904, used Mr. Gathmann's patented inventions.

II.

The word "option" in those letters is the legal equivalent of "right" or "privilege."

Option is the power of choosing; the right of choice or election; an alternative (*Webster*).

An "option" is an unaccepted offer. It states the terms and conditions on which the owner is willing to sell or lease his land, if the holder elects to accept them. If the holder of the option does so elect, he must give notice to the other party, and the accepted offer thereupon becomes a valid and binding contract.

McMillan v. Philadelphia Co., 159 Pa. 142;
Hopwood v. McCausland, 120 Iowa 218.

In the instant case the offer was accepted in writing and thus there became a valid and binding contract between the parties.

III.

Those letters made an express contract of license for the full term of the patents.

(a) This contract was but a license to use the inventions covered by the patents, upon the consideration stated.

United States v. Burns, 12 Wall. 246, 252;
St. Paul Plow Works v. Starling, 140 U. S.
184, 185, 195, 196;
2 *Robinson on Patents*, Secs. 806, 808, 809,
811, 812.

As was said by this Court in *Henry v. Dick Co.*, 124 U. S. on p. 24:

"A license is not an assignment of any intent in the patent. It is a mere permission granted by the patentee. It may be a license to make, sell or use, or it may be limited to anyone of these separable rights. If it be a license to use, it operates only as a right to use without being liable as an infringer."

(b) In the case at bar there was that permission to use and upon a valuable consideration. There was no time limit stated, and so the express license was for the full term of the patents. Unless otherwise agreed, an express license expires at the end of the patent's life.

2 *Robinson on Patents*, Sec. 816 and notes.

In *St. Paul Plow Works v. Starling*, 140 U. S. 184, there was an express contract license (pp. 185, 195, 196). After holding that there was no limitation on the face of the license (p. 195) the Court said:

"The contract has no provision for its termination or its renunciation. The grant is of the right to make and sell the Starling sulky plow under the patent, that is, *under the patent so long as it is a patent, for the whole term of its duration.* (The italics are not in the original.)

IV.

The license could not be renounced or ended in any manner, except by mutual consent or the fault of Mr. Gathmann.

The findings do not state or imply that Mr. Gathmann consented to the attempt of the Government to put an end to the license, or that he was in fault in any respect. This is what happened. October 14,

1904, as we gather from the opinion (R. 13) the Bureau of Ordnance wrote Mr. Gathmann a letter, the body of which is in Finding 6 (R. 8) as follows:

"Referring to your apparatus for drying powder, installed at the naval proving ground for trial: The bureau forwards herewith a copy of the report made by the inspector of ordnance in charge of that station for your information. After carefully considering this report the bureau is of opinion that this apparatus has failed to demonstrate anything that would warrant further experiment with it, and the bureau has instructed the inspector of ordnance in charge of the naval proving ground that, when the drier can hold no more samples the whole amount be put in the dry house until dried to the proper volatiles."

If that letter is to be construed as a notice of renunciation or termination of the license, then we submit that it was not effective in law because it was not done by mutual consent or through the fault of Mr. Gathmann.

St. Paul Plow Works v. Starling, 140 U. S. 184, 195, 196.

In that case, as in the case at bar, there was no provision in the license "for its termination or its renunciation," and afterwards the invention was used by the licensee.

V.

Mr. Gathmann, after the receipt of the letter of October 14, 1904, had the right to regard the license as still in force and to sue for the unpaid royalties, the Government having used the inventions thereafter.

Finding 8 (R. 9) states that, beginning in 1907, there have been used by the Navy Department at various times, in the manufacture of smokeless powder, drying and solvent apparatus illustrated by the drawings set forth as Exhibits 4, 5 and 6. We submit that we have shown in our discussion of the facts that such use was of the Gathmann patented inventions.

The Record (p. 1) shows that Mr. Gathmann filed the original petition in the Court below on April 17, 1915. The original petition is not in the record here but we state professionally that it covered the period of that use from October, 1904.

The amended petition (R. 1-4) was filed July 31, 1919, by the administratrix, and it covers specifically the six year period (p. 3), beginning April 17, 1909, The Court below had no jurisdiction beyond six years prior to the filing of the original petition.

It is shown by Finding 6 (R. 7) that the contract had been put in performance by the parties in 1903 and 1904 and that October 14, 1904, as we have shown, the letter of that date was written by the Ordnance Bureau to Mr. Gathmann, but he had the right to regard the license as still in force and to sue for the unpaid royalties, if the Government thereafter used the patented inventions. That doctrine is established by *St. Paul Plow Works v. Starling*, 140 U. S. 184.

In that case the parties, December 17, 1877, entered in an express contract license (p. 185) for the use of Starling's patent. The contract was put in perform-

ance by the licensee and the patented plows were made and sold, but December 5, 1878 (pp. 186, 188) the licensee gave Starling, the licensor, written notice that the construction of the patented plow was unsatisfactory, and that it renounced its license to make and sell the plow. After a time Starling sued the licensee for the contracted royalties and the case was tried early in 1887 (p. 187). The Court found (pp. 187-190) that the licensee, *after its notice of renouncement*, had made 1,310 plows that were covered by the patent.

In its opinion the trial court held (p. 191) that the licensee could not, without the consent of Sterling, terminate the rights conferred by the license, and, there being no limitation on its face, the license continued until the expiration of the letters patent. That opinion in full is in 29 Fed. 790.

The opinion in this court (pp. 193-198) was written by Mr. Justice Blatchford, and it (p. 195) affirms the opinion of the Circuit Court that the licensee could not terminate, without the consent of the licensor, the rights conferred by the license, and that as there was no limitation on its face, the license continued until the expiration of the patent, "The contract has no provision for its termination or its renunciation."

And on page 196 Mr. Justice Blatchford said:

"We are of the opinion that the license, in the absence of a stipulation providing for its revocation, was not revocable by the defendant, except by mutual consent or by the fault of the other party. If the plaintiff, after receiving the notice, had sued the defendant for infringement, he would have been properly regarded as acquiescing in the renunciation; but, instead of that, he elected to regard the license as still in force, and brought an action to recover the royalties provided for by it, which he was entitled to do. *Marsh v. Harris Mfg. Co.*, 63 Wisconsin 276; *Patterson's Appeal*, 99 Penn.

St. 521; *Union Mfg. Co. v. Lounsbury*, 41 N. Y. 363.

"The defendant could not coerce the plaintiff into putting an end to the contract, by the means it adopted. It must bring a suit to set aside the contract before it can be allowed to say that, in regard to what it afterwards does, it does not act under the contract, provided the machines it makes embody a claim of the patent. Notwithstanding the defendant gave notice that it renounced the license, yet it did not in fact renounce it, for it continued to make flaws embodying one of the claims of the patent."

The judgment of the Circuit Court was affirmed.

We submit that the facts found bring the instant case within the rules of law laid down in the case quoted from.

VI.

The Court below should not have considered what was said by Mr. Gathmann and the Chief of the Ordnance Bureau prior to the writing of the letters of March 26 and 28, 1903.

Finding 4 (R. 6) deals with conversations prior to the writing of those letters, and it is stated that Mr. Gathmann claimed to have a method that would both dry and recover the solvent in a much shorter time than by the systems in use by the Government. A statement of broader nature is made (R. 22) in the opinion of the Court below.

Concerning all this we submit:

(a) There is nothing of the kind in the express contract license.

(b) No principle is better settled at common law than that when persons put their contracts in writing, it is, in the absence of fraud, accident or mistake, conclusively presumed that the whole engagement, and the extent and manner of their undertaking, was reduced to writing.

Bast v. Bank, 101 U. S. 93, 96.

A parol agreement, made before the written license, is merged in the license.

Evory v. Candee, 17 Blatch. 200.

Oral evidence is not admissible to explain a written license, but the parties must stand by it as made

Troy Iron & Nail Factory v. Corning, 1 Blatch. 467.

The rule is stated elaborately in 1 *Greenleaf on Evidence* (14th ed.) Sections 275-277, and we submit that it is applicable here.

VII.

The Court below should not have considered the development and state of the art prior to the issuance of the patents.

The Court below in Findings 10 and 11 (R. 10, 11) put in this record patents issued from 1878 to and including 1902, and the file wrappers on Mr. Gathmann's applications for the patents in suit, for the purpose as it states (top of p. 10) of showing the "development and prior state of art."

Concerning all this we submit that this is not an infringement case but is one on an express contract license to use the inventions as patented. See *United*

States v. Palmer, 128 U. S. 262, 269. Therefore, the development and prior state of the art, and these documents so put in the record, are wholly irrelevant and immaterial and should not be considered.

The Government agreed that if it used Mr. Gathmann's inventions when patented it would compensate him as stated. We submit that it did use such patented inventions and thus became obligated to make payment, no matter what was the prior state of the art. It was left to the patent office to decide what should be patented, if anything. The development and prior state of the art are not within the issues. The sole question here is, Did the Government, under the contract license, use any of the inventions covered by the patents?

VIII.

The licensee is estopped to deny the validity of the patents.

The matters set forth in Findings 10 and 11 (R. 10, 11) were used as an assault on the validity of the patents, and we submit that the Government is estopped to deny that validity after it contracted for the use of the inventions to be patented and did use them or some of them.

The validity of a patent cannot be determined in an action against the licensee for the recovery of compensation or royalties, for the licensee is estopped to deny the validity of a patent, the use of its inventions having been enjoyed by him.

Kinsman v. Parkhurst, 18 Howard 289, 293;
Moore v. Boiler Co., 84 Fed. 346;
Pope Mfg. Co. v. Owsley, 27 Fed. 105;

Magic Ruffle Co. v. Elm City Co., 13 Blatch.
151;

Birdsall v. Perego, 5 Blatch. 251;

Marston v. Sweet, 82 N. Y. 526, 533.

We submit that the judgment of the Court below
should be reversed.

CHAS. J. PENCE,
L. T. MICHENER,
Attorneys for Appellant.

P. G. MICHENER,
Of Counsel.

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In the Supreme Court of the United States.

OCTOBER TERM, 1922.

OLGA GATHMANN FOLEY, ADMINISTRATRIX of the estate of Louis Gathmann, de- ceased, appellant,	} No. 203.
<i>v.</i> THE UNITED STATES.	

APPEAL FROM THE COURT OF CLAIMS.

BRIEF FOR THE UNITED STATES.

STATEMENT.

This case is before this Court on appeal from the judgment of the Court of Claims dismissing appellant's claim for compensation asserted to be due under an alleged contract between appellant and the United States for use of a patented method of drying substances or materials. Two Patents, Nos. 763387 and 763388, are involved in this claim. (See petition, par. 4, Rec. p. 3.)

Appellant alleges that under an express contract between Louis Gathmann, appellant's decedent, and Admiral Charles F. O'Neil, the United States is obligated to pay one cent per pound for powder manufactured by the United States covered by Gathmann's process patents.

Defendant's position is that the agreement styled by appellant an express contract is but an option agreement which never crystallized into an express contract; that the Government has never used the method referred to in the option agreement; and that, furthermore, the patents are invalid for want of novelty.

The Option Agreement.

The contract referred to in the opening statement of this brief, and upon which appellant bases her claim, consists of an exchange of letters in 1903 between Louis Gathmann and Admiral Charles F. O'Neil, then Chief of the Navy Ordnance Bureau. Gathmann's letter was as follows:

1839 VERNON AVE. NW.,
Washington, D. C., March 24, 1903.

SIR: The undersigned has made an invention, "Method of drying materials," for which patent has been filed February 9, 1903, series number 142653.

Now, in consideration of the Navy Department building an apparatus for testing this method, without expense to me, I hereby give the Navy Department the option of using my method of drying materials, if they find it to their advantage, by paying to me, my heirs, or my legal representatives, \$0.01 (one cent) for each pound of material dried by my method.

Very respectfully,

LOUIS GATHMANN.

Admiral O'NEIL,

Chief of Bureau of Ordnance.

To this Admiral O'Neil, under date of March 26, 1903, responded as follows:

NAVY DEPARTMENT,
BUREAU OF ORDNANCE,
Washington, D. C., March 26, 1903.

SIR: Referring to your communication of March 24, 1903, offering the Navy Department the option of using your method of drying materials on payment of 1 cent per pound on materials so dried:

1. The bureau has to inform you that it accepts your proposition and has ordered one experimental apparatus for drying smokeless powder, constructed in accordance with plans submitted by you. This apparatus will be tested without expense to you, and if it works satisfactorily to the bureau, the bureau agrees to pay you, your heirs, or legal representatives, 1 cent for each pound of smokeless powder dried by the method covered by your application or applications filed or to be filed with the U. S. Patent Office, provided a patent or patents is or are issued to you therefor.

Respectfully,

CHARLES O'NEIL,
Chief of Bureau of Ordnance.

Thereafter Gathmann set up at Indian Head, Maryland, at Government expense, experimental apparatus and extensively tested the method set forth in Patents Nos. 763387 and 763388. These tests began in October, 1903, and continued until October, 1904. (Rec. p. 8.)

tion of fluids being familiarly referred to as the "solvent."

To shape this plastic powder mass into the final cylindrical grains, it is forced through a perforated die, being squeezed out through the perforations in long strings like macaroni. These strings or soft powder bars are then cut into the desired lengths, and the grain-forming process is complete.

Immediately after the grain-forming process the powder contains approximately 40 per cent of the ether-alcohol solvent. All but about 4 to 7 per cent, varying according to caliber, of this solvent, must be evaporated out of the powder before it is in condition for use. (Rec. p. 5, Finding II.)

As ether and alcohol are expensive, it is desirable to recover and save as much of this solvent as possible in the process of evaporation. The solvent, being highly volatile, begins evaporating as soon as the grains emerge from the presses and when a considerable part has been evaporated the remainder leaves the powder much more reluctantly. Thus it is found practicable to recover by condensation such solvent as comes off freely from the powder in its "green" state, the remainder being evaporated by a slow drying process. At this latter stage the powder is customarily set in bins in drying houses and permitted to complete its drying process in the warm air circulating within the houses, no further effort being made to condense and recover the relatively small amount of solvent given off by it.

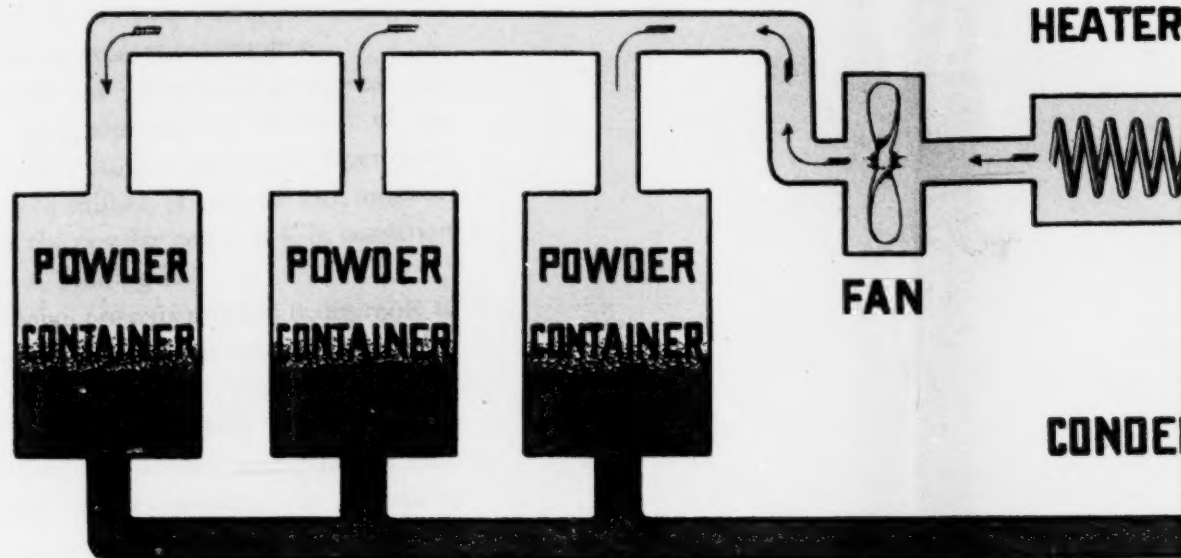


DIAGRAM OF DEFENDANT'S PROC
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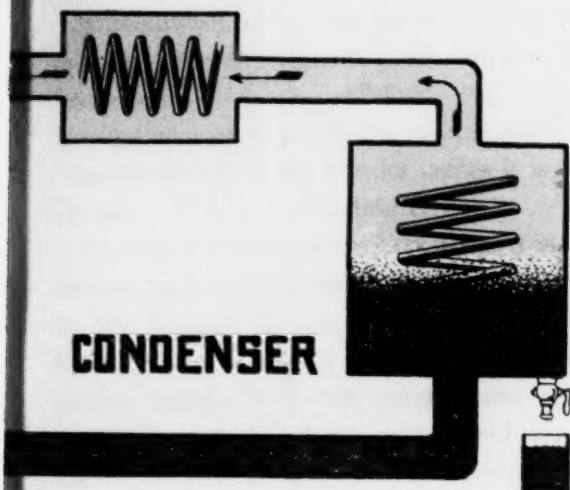
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**Government Method of Recovering Solvent and Drying Prior to
Advent of Gathman.**

For the Court to gain an accurate understanding of precisely what Gathman proposed to the Navy, through Admiral O'Neil in 1903, and to make clear exactly how Gathman's proposed powder treatment differed from the processes already in use, there is inserted at this point a brief description of the Government process as used in 1900, and for some time thereafter, long before Gathman suggested his improvement.

The apparatus used by the Government beginning in 1900 is shown in Exhibit I, a part of Finding III, Rec. p. 5. This Exhibit I is printed opposite this page, which illustrates the important features both of this apparatus and the process carried out in its use. Referring now to the diagram opposite, observe the three powder containers in which the fresh, or "green," powder is placed. From the bottom of these containers air conduits lead to the condenser, which is merely a chamber cooled by refrigerating coils. From the powder containers to the condenser the pipe and chamber space is filled in with blue, the color being used to indicate air highly charged with vaporous ether and alcohol (solvent). Arrows indicate the direction of flow of air within the apparatus.

In the condenser the cold coils lower the temperature of the solvent-laden air, resulting in the liquefaction of the solvent, which is recovered in fluid form in the receptacle beneath. At this juncture it

is important to note that the Government so operated its apparatus as to render condensation as complete as possible at all times, thereby recovering solvent rapidly and returning dry air through heater and fan to the powder chamber. To illustrate this point, the pipe and chamber space beyond the condenser is filled in with yellow, the yellow color being used in all diagrams to indicate air substantially free of solvent vapor.

The Court of Claims in Finding III (Rec. p. 5) states:

In this method there is, generally speaking, a closed circuit embracing a heating chamber, a powder chamber, and a condensing chamber, with the necessary connecting pipes or conduits and means for effecting circulation of the air in the circuit, as by fan or gravity. In operation the warm air from the heating chamber passes on to the powder chamber, when it absorbs solvent from the "green" powder, then passes on to the condensing chamber, where the solvent carried by it is condensed to liquid form, the air then passing on to the heating chamber again for reheating and repetition of the cycle.

This process just quoted from Finding III was technically known as a closed circuit, no outside air being admitted during the operation. Following this solvent-recovery treatment, the powder was placed in dry houses and dried to the proper condition merely by causing warm air to circulate through it, as already described. (Finding III, p. 6, Rec.)

Gathmann's Proposed Method.

The Gathmann Patents Nos. 763387 and 763388, introduced in evidence by appellant, afford a full, though not always clear, description of his powder-drying scheme. At the time Gathmann discussed his ideas with Admiral O'Neil there were no patents, merely an application for one. That application when finally it ripened into Patent No. 763387, and a later process patent, No. 763388, disclose substantially the same process and apparatus for working it that the Government constructed under Gathmann's direction at Indianhead, Maryland. (Finding VI, Rec. p. 7.)

It will be remembered that in the old Government 1900 process (see opposite page) dry air was forced down through the green powder, absorbing therefrom its load of volatilized solvent. The air, now heavily charged with the ether-alcohol vapor, passed into the condenser, where cold coils condensed all the solvent vapor as nearly as possible, thus drying out the air which, after being reheated, was returned to the powder chambers to repeat the process.

Now, Gathmann believed that the dry air blowing on the powder tended to harden and dry the grains on their surface, thus imprisoning much solvent within the grains behind a relatively impervious crust. (Lines 25-30, Pat. No. 763387 and 763388.)

The essence of his theory was to keep the air in the drying system or circuit continually charged with solvent vapor, condensing out of it *only a portion* of this vapor, thus returning to the powder chamber,

not dry air (as in the Government process) but air still charged with solvent vapor. In this manner he hoped to avoid the formation of dry surface crusts on the powder grains, keeping the grains pervious and so absorb their liquid "from the inside out."

Referring now to the diagram opposite this page this will be seen illustrated.

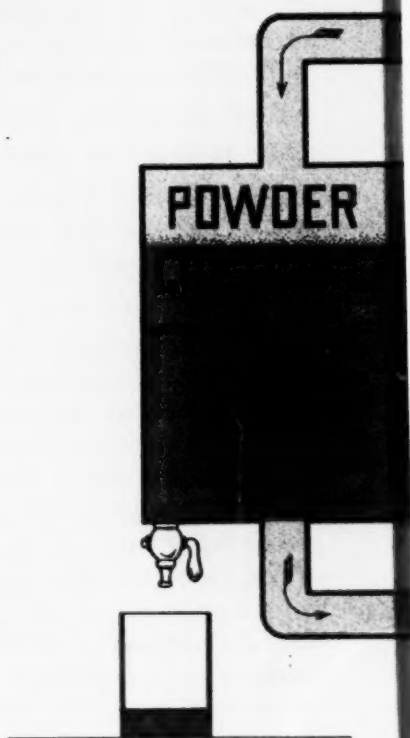
In the powder chamber Gathmann provided what he calls a "heater-condenser" coil; that is, a coil to be connected at will with a heating or with a cooling fluid. By manipulating the temperature of his coil, he proposed so to govern the condition of the powder mass within the chamber that the air within it should at all times be saturated with solvent, and never dry, as in the Government's method.

In Patents 763376 and 763388 (lines 8-15, p. 2) Gathmann provides for the actual introduction of extra fluid, such as steam, to attain this constant air saturation. As shown by the blue coloring, Gathmann proposed not only to keep the air within the powder chamber saturated with solvent so long as possible but also to regulate or temper the condenser so that only a portion of this vapor content would be liquefied out, thus returning the air through fan and heater, still damp with uncondensed solvent, to the powder chamber.

The Gathmann Patents Nos. 763387 and 763388.

In Gathmann's Patents Nos. 763387 and 763388, lines 12 to 48 (p. 1), he expressly disclaims that his process covers all closed circuit dryers, saying:

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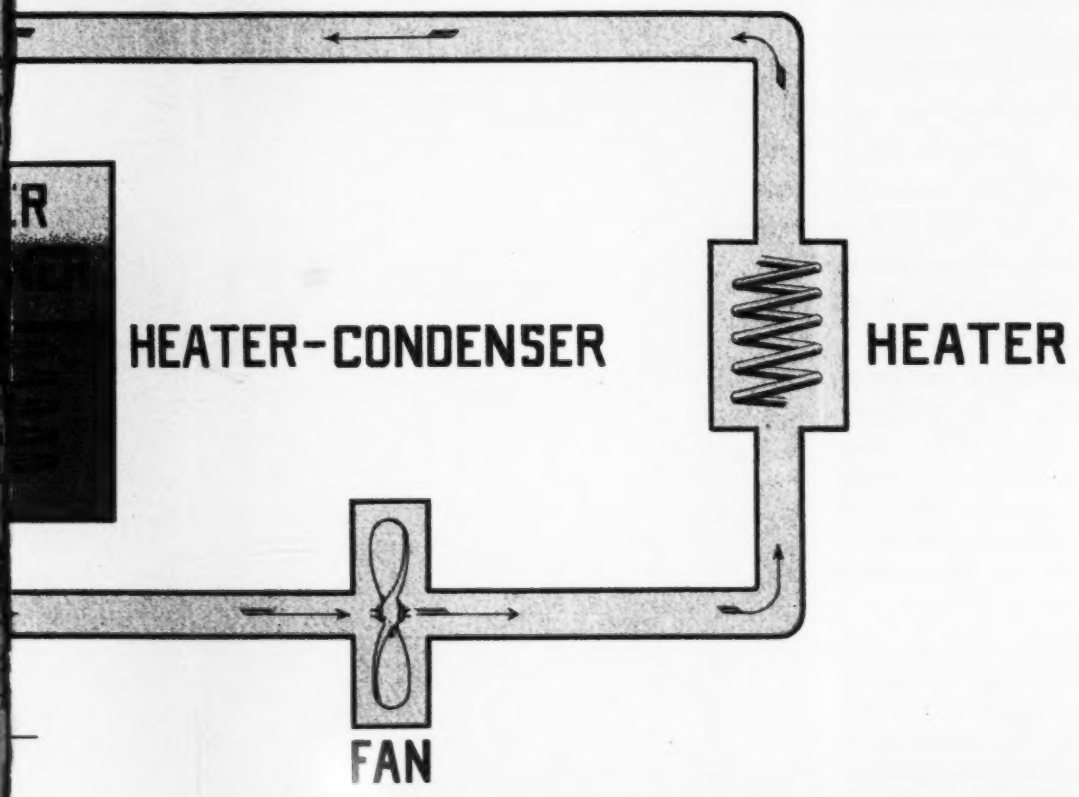


DIAGRAM OF GATHMANN PROCESS



ARSHAM IN GATHU

In this art it has been common to make use of a closed circuit comprising, generally speaking, a drying chamber, means to heat the air in the circuit to vaporizing temperature, means to cause the air to circulate in the circuit and thereby vaporizing the moisture in the substance or material contained in the drying chamber, and a condenser to condense the vapors as they are evolved from the substance or material to be dried or substantially dried.

This he describes as being common in the art, prior to his invention, exactly the method which the Government has used not only since the option agreement of 1903 but as far back as 1900. Gathmann carries his disclaimer still further to say that (lines 28-42, p. 1 of Pats. 763387 and 763388):

* * * it has been proposed to start the operation by first producing a vapor-laden atmosphere at a temperature below the boiling point of water by causing the air in a closed circuit to absorb more or less steam while in circulation in said circuit and before it enters the drying chamber, the moisture-laden atmosphere being then heated while in circulation to a vaporizing temperature, the circulation being kept up until the material to be dried has been heated through and through and has acquired the same temperature as the moisture-laden atmosphere and until the latter has become saturated by additional vapor evolved from the material being dried.

Thus his own patents admit that there was no novelty in a closed circuit dryer with a heater, condenser, and fan; nor even in the use in a closed

circuit of an atmosphere vapor-laden before it enters the drying chamber and the heating "through and through" of the substance in a circulating vapor-laden atmosphere.

He states, lines 70-72, p. 1, of both method patents that his invention "has for its combination the two methods described." Clearly, then, the patents are limited on their face not merely to the use of a closed circuit system as contended by claimant but are limited to the combination of the two; that is, they require not only a closed circuit, including a heater, fan, and condenser, but the use in such circuit of a vapor-laden atmosphere throughout the system and that the condensation shall be regulated so as to maintain that vapor-laden condition and prevent dry air from coming in contact with the powder. (Lines 93-95, p. 1, and lines 1-3, p. 2, of each of the method patents.)

Such adjustment of the evaporation and condensation was to be maintained by the use of what he called a heater-condenser, a pipe coil inside of the powder chamber, which was to be used as a heater in the first part of the operation and its temperature then gradually lowered. The idea of producing a vapor-laden atmosphere as a drying medium is emphasized by the provision of "a jet-pipe I' in communication with the steam pipe I for injecting steam into the drying chamber." (Pat. 763387, p. 3, lines 9-11; Pat. 763388, p. 2, lines 49-52.)

The heater condenser is mentioned by name five times in the specification of Patent No. 763387. The

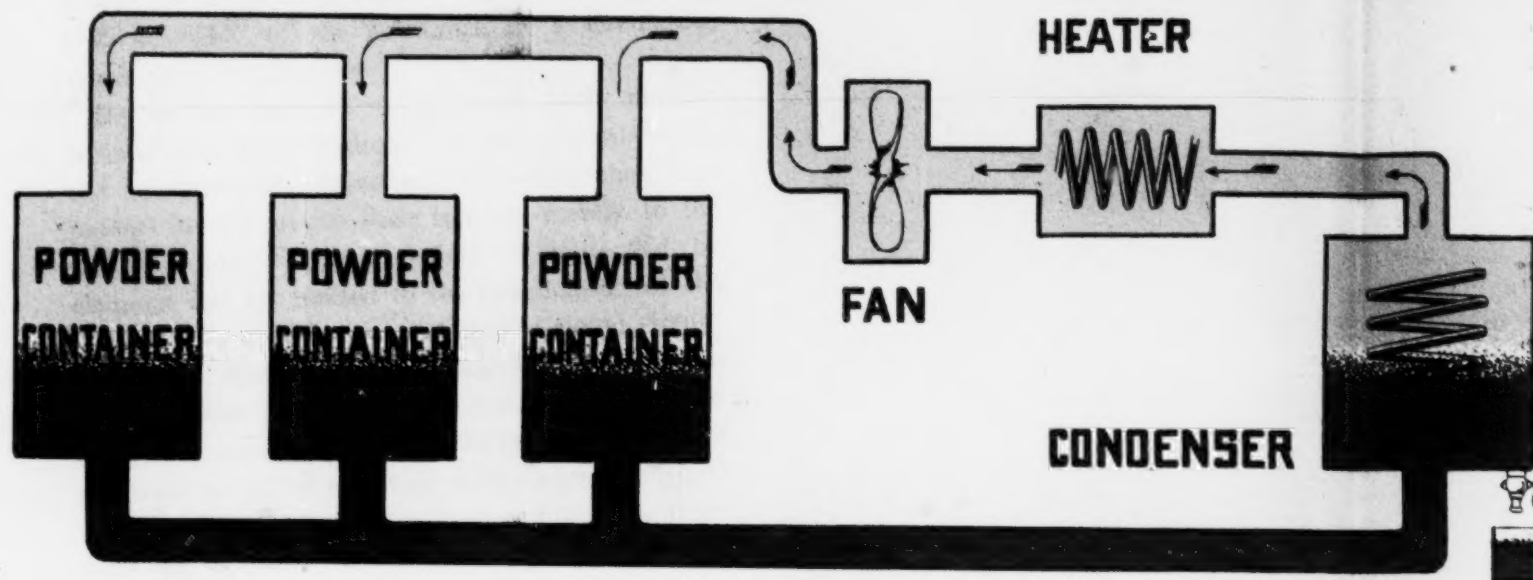


DIAGRAM OF DEFENDANT'S PROCESS AS USED 1900

GOVERNMENT PROCESS.

- (1) Dry air forced through the powder.
- (2) Condensation immediately begun and continued as complete as possible, relieving air of practically all its solvent vapor.
- (3) No means for introducing extra solvent.

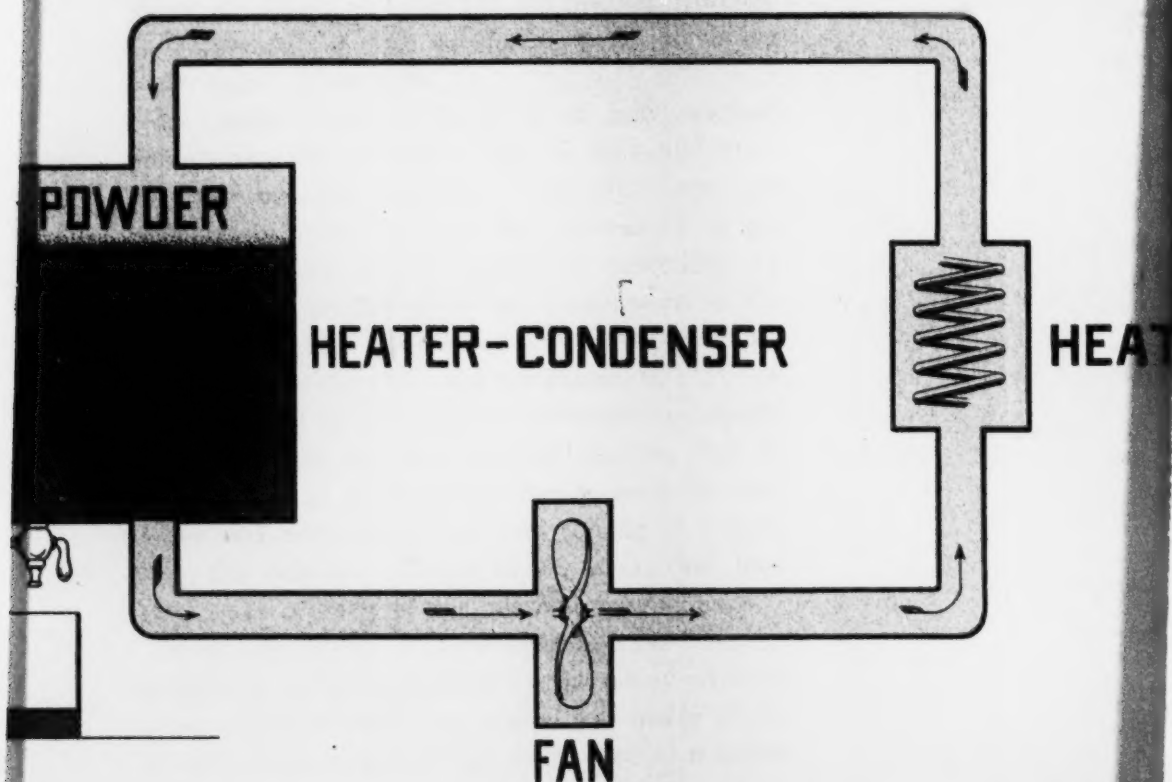


DIAGRAM OF GATHMANN

GATHMANN'S PROCESS.

- (1) Vapor-laden air forced through the powder.
- (2) Condensation delayed until atmosphere became saturated, and then condensation regulated to relieve air of only a portion of its solvent vapor.
- (3) Supplementary means for introducing extra fluid solvent to keep air saturated in the powder chamber and vapor laden throughout the system.

expression "vapor-laden atmosphere" occurs at least eleven times; the saturation of the atmosphere is specified not less than eight times, and regulation of condensation is referred to five times. The same expressions occur with equal frequency in the other method patent pleaded, No. 763388.

These features are clearly and positively essentials of the method that was tested for Mr. Gathmann. They are the soul and substance of all of his patents, and only because this is so were his patents ever allowed to issue by the Patent Office.

At the risk of wearying the Court with recapitulation of points that may already be clear, we offer the following tabular comparisons between the Government's treating process and that of Gathmann, and for a graphic illustration show side by side the two diagrams already discussed. (See opposite page, the two diagrams pasted together.)

Gathmann Falls After Extended Test.

Beginning in October, 1903, and continuing until October, 1904, the Gathmann process was continuously tested at Indian Head, Maryland. Gathmann personally directed all the operations of the drying tests. He had absolutely a free hand to prove the merit of the process, but the time required to dry the powder was not reduced, nor was there any improvement attained over the old 1900 method used by the Government. (Finding VI, Rec. p. 8.)

No change was made in the Government's solvent recovery and drying process as a result

of this test of Gathmann's said method. (Finding VI, Rec. p. 8.)

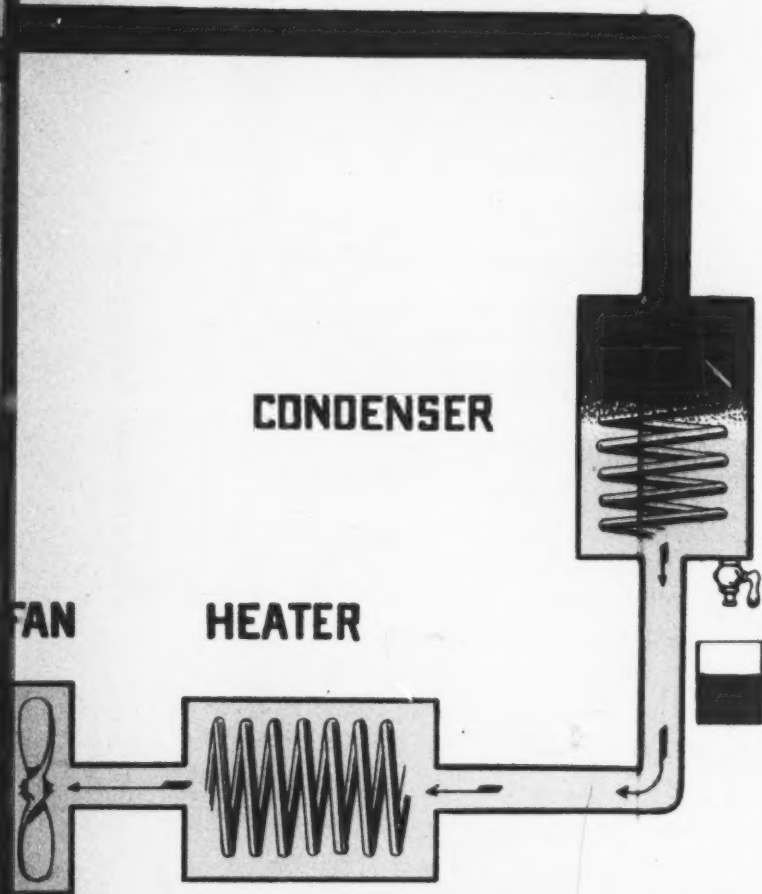
After failure of Gathmann's test the Government used three types of drying and solvent recovery apparatus, viz, the 1907 process, the 1910-1916 process or box type, and the 1914 process. (Exhibits 4, 5, 6, Finding VII, Rec. 9.)

The Government 1907 Solvent Recovery.

It is true that the detailed structure of the apparatus used by the Government from 1907 on differed in some mechanical respects from the original apparatus used in 1900. The 1900 apparatus had too many pipe connections, causing undue leakage, and in 1907 this leakage was obviated by providing one large powder chamber instead of several small ones, but the process in theory and practice remained identical with the 1900 method. This 1907 structure is shown in Exhibit 4, made part of Finding of Fact VIII, page 9, Rec., and for clearness and convenience we have shown it in diagrammatic form on the opposite page. The arrows indicate the direction of the air current through the system, and it will be noted that the air passes upward through the powder chamber. In this detail it differs from the Gathmann plan (see sketch Diagram Gathmann Process, opposite page 10) as well as from the 1900 Government apparatus. (Exhibit 1, Rec. p. 5, Finding of Fact III.)

In this 1907 structure, air which has absorbed its load of solvent in the drying chamber passes out of the top of the chamber and continues to the con-

CONTAINER

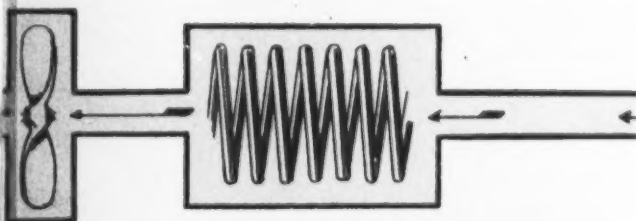


**GRAM OF DEFENDANT'S PROCESS AS
RE-ESTABLISHED IN 1907**

CONDENSER

FAN

HEATER



GRAM OF DEFENDANT'S I
RE-ESTABLISHED IN

densers. This part of its journey, during which it carries ether-alcohol solvent, is indicated by the blue coloring. In the condenser the vapors of ether and alcohol are condensed and drawn off, and the air, now freed of its solvent vapors, passes on through the heater and fan back to the powder chamber, as indicated by the yellow coloring in the sketch opposite page 14, "Diagram of defendant's process as reestablished in 1907."

By reference to Exhibit 1 it will be seen that while the structures used by the Government in 1907 differ slightly in mechanical detail from the old 1900 Government structure, the process itself is identical in both cases. Air-containing solvent vapors, indicated by the color blue, appear in both from the powder chamber to the condenser, and air free solvent vapors, indicated by yellow, appear in both from the condenser, around through the heater and pass to the powder chamber.

It will be remembered that the distinguishing feature of the Gathmann plan was the presence of a considerable amount of solvent vapors in the air even after passing the condenser and on its way back to the powder chamber, as indicated by the light blue coloring in sketch (Gathmann's device), opposite page 10 this brief.

The Government 1914 Solvent Recovery.

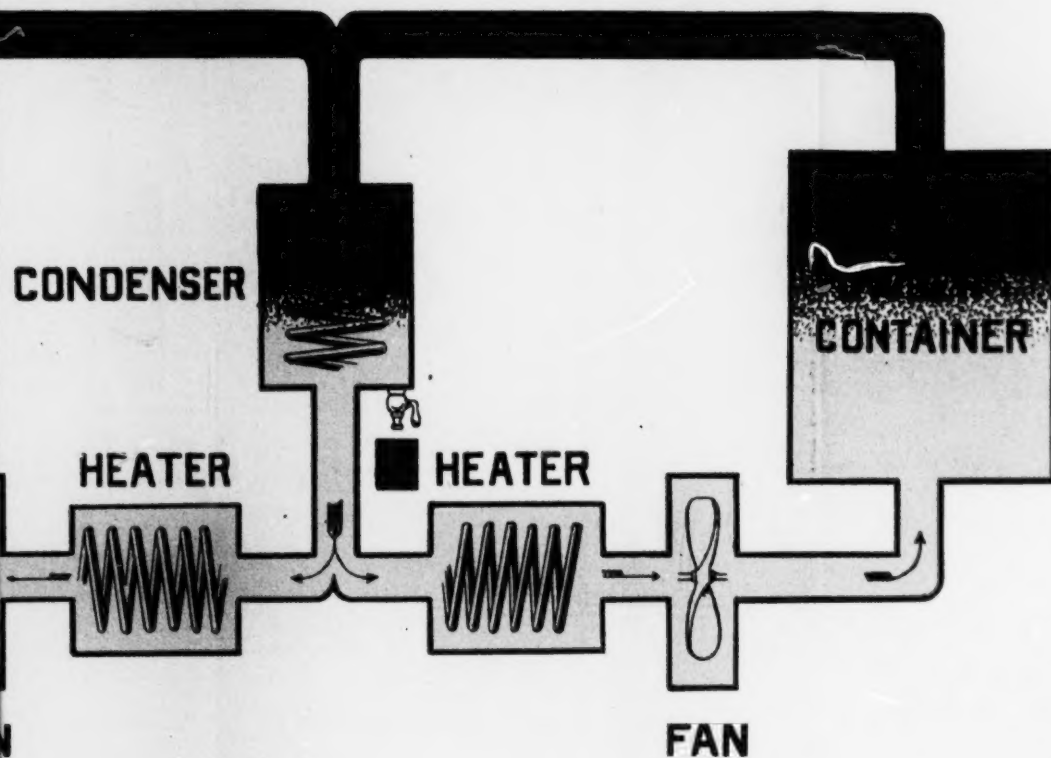
The only modification subsequently made in this solvent recovery of 1907 (see opposite page 14) was the use of a single condenser for a number of powder cans instead of having, as in 1907, a unit

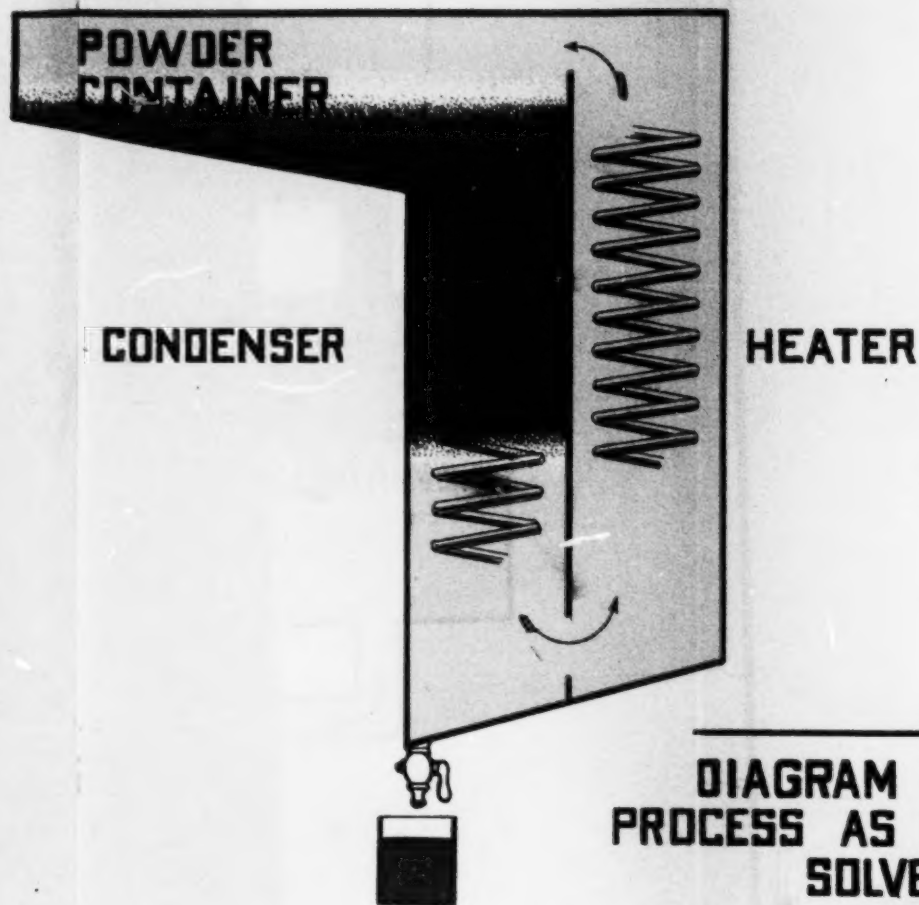
condenser for each powder can. This change was made in 1914. The Government solvent recovery as then modified and as used from that time on is shown in Exhibit 6, made part of Finding VIII, Rec. 9, and diagrammatically shown in sketch on the page opposite. It will be seen that the air pipes from the powder cans carrying solvent vapors, indicated by the blue coloring, unite in a single pipe before proceeding to a single condenser, which thus receives the air and simultaneously condenses the solvent from a number of powder cans. Only two powder cans are shown in the sketch, for simplicity, although a larger number of powder cans may be served by the single condenser. As the air, relieved of its solvent vapor by the condenser proceeds therefrom, it is carried off through branch pipes to the several powder cans, as indicated by the yellow coloring. Except the feature of using a single condenser for a number of powder cans, the solvent recovery of 1914, in structure and use, is identical with the solvent recovery of 1907 (see sketch, opposite page 14) and is distinguished in precisely the same way from the Gathmann structure and method (sketch, opposite page 10).

The Government 1910-1916 Solvent Recovery.

Since the Gathmann test in 1903 the Government has used from 1910 to 1916 one other solvent recovery known as the box-type solvent recovery. This is Exhibit 5, made a part of Finding of Fact VIII (Rec. p. 9). It is illustrated diagrammatically opposite page 17. It consisted merely of an odd-

**DEFENDANT'S PROCESS AS USED FROM
1914**





**DIAGRAM OF DEFENDANT'S
PROCESS AS USED IN BOX-TYPE
SOLVENT RECOVERY
1910 TO 1916**

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shaped box having in one side a chamber for the powder, as indicated, and on the other side a heating coil and a refrigerating coil separated by a partition having apertures to permit a circulation of air, as indicated by the arrows, from the condenser to the bottom of the heater, and from the top of the heater into the powder chamber. The blue coloring indicates air carrying solvent vapors from the powder down to the condenser and the yellow coloring, as in all of the sketches, indicates dry air—that is, air from which the solvent vapors have been condensed, from the condenser through the heater, back into the top of the powder chamber. The absence of a fan will be noted. The circulation was caused simply by gravity, the condenser cooling the air and thus making it heavy on one side of the partition while the heater caused an updraft on the other side of the partition, precisely like a draft up a chimney. As in the other solvent recoveries, there was no use in this of any of Gathmann's ideas.

In all of these solvent recoveries there is manifestly no means for producing or maintaining a vapor-laden atmosphere in treating the powder, nor has the Government followed the teaching of the Gathmann patents directed to the regulated and gradual recovery of the solvent.

The Patent Claims Relied Upon.

The patent claims asserted to cover the Government's powder-making at Indian Head are claims 1, 2, and 4 of Patent No. 763387 and claims 1 and

2 of Patent No. 763388. Claim 1 of No. 763387 is as follows:

1. Producing a *vapor-laden atmosphere in a space containing* the substance to be dried, causing the vapor-laden atmosphere to flow *downwardly* through said space and through a space on a *lower level* and *back* again to the first-named space, heating the atmosphere to a vaporizing temperature during circulation, *maintaining the circulation until* the atmosphere is *saturated* with vapor, *then* lowering the temperature of said atmosphere during its passage through the space on a *lower level* to a condensing temperature, restoring the lost heat to the atmosphere after it has left said lower space, and continuing these operations under exclusion of ambient air, until the substance is substantially free from vaporizable matter, for the purpose set forth. (Italics ours.)

By its own terms it calls for a vapor-laden atmosphere throughout the system, and a preliminary circulation of heated atmosphere until saturation is obtained before the condensation is begun; requires that the atmosphere shall flow downwardly through the powder, and that the condensation shall take place in a space on a lower level than the drying chamber.

Claim 2 is as follows (italics ours):

2. The method of drying, which consists in causing a drying medium to flow *downwardly* through a space containing the substance to be dried and through a second space on a *lower level* and back to the upper part of the

first-named space, heating the said medium to a vaporizing temperature while in *circulation, maintaining the latter* until the medium is saturated with vapor, *then* reducing the temperature of the saturated medium to a condensing temperature during its passage through the space on a *lower level*, restoring the lost heat to the medium after it has left the last-named space, and continuing these operations under exclusion of ambient air until the substance to be dried is substantially free from vaporizable matter, for the purposes set forth.

The same requirements are in this claim as in claim 1, except that it apparently does not require that the vapor-laden atmosphere be produced in the drying chamber before circulation is started, but it is apparent that the circulation of heated air preliminary to the beginning of condensation means that the atmosphere will be vapor laden in all parts of the system.

Claim 4 is as follows (*italics ours*):

4. The method of drying, which consists in heating a drying medium to a vaporizing temperature *while confined in a space containing* the substance to be dried, then causing the so-heated medium to flow *downwardly* through said space and thence through a space on a *lower level* and *back* to the upper part of the first-named space, reducing the temperature of the medium to a condensing temperature during its passage through said space on a *lower level, restoring* the lost heat to the medium during its passage through the

space containing the substance to be dried, and maintaining these operations until said substance is substantially free from vaporizable matter, for the purposes set forth.

This claim has all the limitations of claims 1 and 2, except that saturation is not mentioned, but the preliminary heating of the drying medium "while confined in the space containing the substance to be dried," that is, while the chamber is "cut out of the circuit" (lines 43, p. 3, Pat. 763387), is evidently for the purpose of producing saturation, as described on page 3 of the specification (same patent) under "First," lines 56-90.

The requirement of a preliminary circulation of heated medium, in all of these claims, is not fulfilled by any of the solvent recovery processes the Government has used. In no Government apparatus has the temperature of the condenser been purposely varied during the process.

The employment of a vapor-laden atmosphere as a drying medium, clearly present in all of these claims, is not present in the Government's solvent recovery. On the contrary, as much of the solvent as possible is extracted in the condenser.

All of these claims specify that the drying medium shall flow "downwardly" through the drying chamber, whereas in the solvent recovery which was re-established in 1907 and now used, the air passes upward through the powder.

These claims all require that the condensation shall take place at a lower level than the drying chamber,

whereas in the solvent recovery reestablished in 1907 and now in operation, the condenser is on the same level.

These two features last mentioned are present in the box type of solvent recovery, which was used from 1910 to 1916, but the box type does not meet the claims and various other requirements set forth above. The box type solvent recovery has no fan. The circulation is merely induced by gravity.

In obtaining his Patent No. 763387, Gathmann himself distinguishes his device from evaporators having only gravity circulation.

As to United States method Patent No. 763388, claims 1 and 2, relied on by claimant, are as follows (*italics ours*):

1. The method of drying, which consists in *first forming a vaporous atmosphere in a space containing the substance or material to be dried, then causing said atmosphere to continuously flow from said space through a second space and back to the first-named space, heating the atmosphere while in circulation, to a vaporizing temperature, then reducing the temperature of the atmosphere during its passage through said second space, restoring the lost heat and regulating the condensation to maintain the atmosphere in a vaporous condition until the substance or material to be dried has been freed from a portion of its vaporizable matter, then condensing the vapors, and effecting these operations under the exclusion of ambient air, for the purposes set forth.*

2. The method of drying, which consists in first forming a *vapor-saturated atmosphere in a space containing* the substance or material to be dried, *then* causing said atmosphere to continuously flow from said space through a second space and back to the first-named space, reducing the temperature of the atmosphere during its passage through said second space to a condensing temperature, restoring the lost heat to the atmosphere after it has left said second space, *regulating the condensation to maintain the atmosphere in a vaporous condition* until the substance to be dried has been freed from a portion of its vaporizable matter, then condensing the vapors and effecting these operations under exclusion of ambient air, for the purposes set forth.

They both employ a vapor-laden atmosphere as a drying medium; require a preliminary forming of a vaporous atmosphere in the drying chamber before the circulation is started; then a circulation of the air before condensation is begun, and a regulation of the condensation so as to maintain the vaporous condition of the drying medium.

Claim 1 evidently contemplates the production of a saturated atmosphere by circulation of the heated medium before condensation is begun, as described at lines 81 to 90 on page 1 of the specification, while in claim 2 the saturated condition is to be produced by heating the material or injecting vapor before circulation is started, as described in lines 5 to 16 on page 2 of the specification.

It should be noted that the specification of both method Patents Nos. 763387 and 763388 contain the same disclaimer, in fact the two patents are identical as far as line 30, page 2 of each. The specification also describes the supplying of steam to the drying chamber (p. 2, lines 49-53; p. 3, lines 36-40), the use of a "heater-condenser" in the lower part of the powder chamber (p. 2, lines 56-57, 83-101, 116-130; p. 3, lines 1-50), and the preliminary use of the drying chamber as a "heating chamber" while it is cut out of the circuit (p. 2, lines 68-83; p. 3, lines 36-50).

In the Government process there is no such regulation of the condensation, no use of a vapor-laden atmosphere as a drying medium, no preliminary forming of a vaporous or vapor-saturated atmosphere in the drying chamber before circulation is started, and no preliminary circulation of the heated medium before condensation is begun.

Although it has already been shown herein that the Government did not use the process that was tested at Indian Head for Mr. Gathmann, and his own disclaimer in his patents eliminates from their scope the apparatus the Government has used, defendant feels that it should stand upon its right to have the prior art considered by the Court.

That the prior art exhibits disclose the so-called Gathmann process does not seem to be challenged by appellant, who is driven instead to stand upon his unsound objection to their introduction. In view of the terms of the claims themselves and the patentee's disclaimer heretofore discussed, it seems

hardly warranted to enter into a long detailed discussion to review individually all of the prior patents, in which the "Gathmann Method" and also the Government methods are disclosed over and over, as one inventor after another during the last half century has conceived minor modifications of the closed-circuit evaporator.

The Prior Art.

Exhibit A-12, British Patent No. 19281 of 1897, to Bergstrom, shows not only a closed circuit, with heater C, condenser A, and fan C, but also the down draft through the substance to be dried which features several of the claims in suit, and the importance of which was argued by Gathmann in procuring his Patent No. 763387. (File wrapper and contents, defendant's Ex. 7, pp. 29, 40.)

Exhibit A-13, British Patent No. 30333 of 1897, to Raffold, shows not only a closed circuit with a heater E, a condenser H, and a fan F, but a "regulation of the air movement * * * effected by means of flaps or valves * * * so arranged that the air only enters into the condensing pipe when fully saturated with vapor" (lines 34-40, p. 3), similar in their operation to the valves and gates f', f'', F' and F'' and dampers W and W' in Gathmann's Patent No. 763387, which however are not present in the Government devices.

Exhibit A-1, British Patent No. 1112 of 1878, to Smith, shows not only a closed circuit with a heater C, a condenser H, and a fan E, but the up

current through the material, which the Government uses, and partial condensation (lines 17-18, p. 3; lines 20-21, 25-26, p. 4), which Gathmann emphasizes. Excepting that a second heater is shown within the drying chamber and partial condensation is contemplated, both of which extra features are anticipations of Gathmann, the Smith device is substantially identical with the principal solvent recovery used at Indian Head and is a complete anticipation of the claims in suit.

Exhibit A-4, British Patent No. 6208 of 1887, to Sutcliffe, shows not only a closed circuit system with heating pipes B, a fan C, and describes the use of a condenser to extract the moisture from the drying medium, but also prescribes "circulating the heated air through and through the material" (lines 36-38, p. 3), and "circulating the air again through the material until it becomes saturated or nearly so" (lines 1-5, p. 4), which are almost Gathmann's own words, although antedating his patents by nearly a quarter of a century.

Exhibit A-16, British Patent No. 6067 of 1899, to Vignon-Dante, shows a closed circuit in which it is "always the same volume of air which is used during the process" (lines 10-11, p. 2), with a fan 6 and a heater 3, and while the text is somewhat vague as to the disposition of the moisture, probably because of erroneous translation from the French inventor's native language, the description says that "the vapor of water which

it may contain is then reduced in tension and escapes through the cover" (lines 8-9, p. 2); the drawing shows clearly the course of the air without any escape thereof, and the condensation evidently took place in the chamber 8, the liquid being drawn off through the "cover" or outer wall of the apparatus, as Gathmann proposed. It shows the down draft through the material which is an element of several of the claims in suit.

Exhibit A, British Patent No. 17980, of 1898, shows not only a closed circuit with a heater G, a condenser F, and a fan H, but also steam coils BB within the drying chamber, like Gathmann's pipes C and Dx in Patent No. 763387, D in Patent 763388, their purpose being, as in the Gathmann patents, to give the material a preliminary heating before the circulation is started (lines 17-27, p. 3, of British patent), as emphasized by Gathmann in urging the issuance of his Patent No. 763388.

Exhibit A-15, U. S. Patent No. 632508 of 1899, to Allington, discloses not only a closed circuit system in which "the same body of air is constantly drawn from the drying chamber through the condenser and thence through the heater, being returned from this latter to the drying chamber" (lines 94-104, p. 1), but also regulated or partial condensation (lines 34-38, p. 2).

Having the heater, condenser, and fan in a closed circuit, it is a complete anticipation of the principal Government solvent recovery and of the claims in suit as construed by plaintiff.

Exhibit A-3, U. S. Patent 276405 of 1883, to Hoeveler, discloses not only a closed circuit (lines 33-40, p. 1), with a blower D, a heater G, and a condenser H, but also graduation of temperature and moisture of the drying medium (lines 70-76, p. 1).

Aside from the latter feature, it is a complete anticipation of the principal Indian Head solvent recovery and of the claims in suit as construed by appellant.

Exhibit A-17, U. S. Patent No. 653555 of 1900 to Hart and Ashworth, relates specifically to solvent recovery and discloses a closed circuit (lines 73-83, p. 1; lines 63-72, p. 2), with a condenser 9, a blower 16, and a heater 19. It is a strikingly exact anticipation of the present solvent recovery at Indian Head.

Exhibit A-11, U. S. Patent No. 515913 of 1894, to Larsson and Bergstrom, shows not only a closed circuit (lines 42-45, p. 2) "with a condensing compartment No. 8," a "blower F" and heating compartment A, but also partial condensation (lines 26, 27, p. 2) and down draft (line 14, p. 2).

Exhibit A-8, U. S. Patent to Maxim of 1890, relates specifically to "Recovering solvents from explosives" and is substantially identical with the Indian Head solvent recovery, having a heater, fan, and condenser in a closed circuit. It answers plaintiff's construction of the claims in suit.

Exhibit A-19, U. S. Patent No. 696989 of 1902, to Marshall, relates specifically to solvent recovery, and shows not only a closed circuit with a

condenser *e* (lines 79-80, p. 1) and a fan *g* (lines 89-90, p. 1), but heating coils *within* the drying chamber (lines 71-75, p. 1), as shown in all Gathmann's patents and a graduation of temperatures (lines 49-50, p. 1).

Exhibit A-7, U. S. Patent No. 426453 of 1890, to Morton and Andrews, shows not only a closed circuit (lines 31-32, p. 1) with a heater *F*, inside the drying chamber, a condenser *B*, and a circulation caused by gravity as in the 1910-1916 solvent recovery of Indian Head, but a regulation or retardation of the circulation by means of dampers, as proposed by Gathmann to "retain the hot air in the drying chamber a short time for the double purpose of increasing the temperature and retaining moist air in contact with the lumber" (lines 46-53, p. 2).

Exhibit A-5, U. S. Patent No. 355559 of 1887, to Sargent, shows fans *C* and *C*, heaters *D* and *P'*, and condensers *P* and *P* in a closed circuit (line 95, p. 1), and regulation of the current and moisture of the air by means of dampers *d'* and *d*² (lines 90-102, p. 1).

Exhibit A-18, U. S. Patent No. 675070 of 1901, to Sargent shows a device similar to that last mentioned, with a closed circuit (lines 83-84, p. 1) including a heater (lines 22-25, p. 2), a condenser (lines 113, 116, p. 2) and a fan (lines 1-5, p. 2) and also Gathmann's down draft through the material (lines 11-12, p. 2) and partial condensation (lines 113-125, p. 2).

Exhibit A-6, U. S. Patent No. 363704 of 1887, to Van Osdel, shows a closed circuit drier (lines 1-14, p. 2) in which there is a heater N, a condenser E, and circulation reduced by gravity (lines 61-64, p. 2) as in the 1910-1916 solvent recovery at Indian Head, and diminishing moisture of the drying medium (lines 67-71, p. 2).

Exhibit A, U. S. Patent No. 245911 of 1881, to Wood, shows a closed circuit with heaters D, D' and B (lines 50-55, p. 1), the latter being within the drying chamber, a condenser J (lines 13-20, p. 2), a regulation of the air current by means of dampers e, e, e, e, and f' f² and f³ (lines 90-96, p. 1; lines 5-13, p. 2), a regulation of the rate of condensation by gates or valves (lines 34-44, p. 2), and the artificial production of a vapor-laden atmosphere (lines 55-63, p. 2). It shows all the elements of the alleged Gathmann invention which was tested by the Government.

Thus there was already in the art, at the time of Gathmann's entry, a great variety of closed-circuit evaporators, several of them substantially identical with both types of the Government solvent recoveries.

The prior art also discloses everything substantial proposed by Gathmann or covered by the claims in suit, wherefore the claims should be held invalid.

CONCLUSION.

It is submitted that the Gathmann method after a fair test proved a failure, and the Government profited nothing because of such experiment;

~~opposite page 17. It consisted merely of an~~ that regardless of patents no use has been made of any idea proposed by Gathmann, and, lastly, that the Gathmann patents in suit Nos. 763387 and 763388 are invalid.

An affirmance of the Court of Claims is respectfully urged.

Respectfully submitted.

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MELVILLE D. CHURCH,

Attorney.

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**FOLEY, ADMINISTRATRIX OF GATHMANN, v.
UNITED STATES.**

APPEAL FROM THE COURT OF CLAIMS.

No. 203. Argued January 12, 1923.—Decided January 29, 1923.

1. G wrote to the Navy Department, with respect to his invention for drying materials, that, in consideration of the Department's building a testing apparatus at its own expense, he gave it the option of using the method, if it found it to its advantage, by paying so much for each pound of material so dried. The Department accepted the proposition, saying that it had ordered an experimental apparatus on G's plan, which would be tested and, if it worked satisfactorily to the Bureau of Ordnance, would pay him as proposed. After the test, the Bureau notified G that the test proved unsatisfactory and was abandoned. *Held:*

(a) Not a contract that the Department would use the method, but an option, or at most a conditional obligation subject to be terminated by the Department when the test proved unsatisfactory. P. 675.

(b) By remaining silent and inactive for five years after receiving notice from the bureau that the relations between them were terminated, G acquiesced. P. 675.

2. Patents 763,387 and 763,388, issued to Gathmann, for a method of drying materials, with the aid of a "vaporous atmosphere" were either anticipated, or not infringed, by the "closed-circuit method" used by the Government in this case for drying smokeless powder. P. 676.

56 Ct. Clms. 303, affirmed.

APPEAL from a judgment of the Court of Claims.

Mr. Charles J. Pence, with whom Mr. L. T. Michener and Mr. P. G. Michener were on the brief, for appellant.

Mr. Melville D. Church, with whom Mr. Solicitor General Beck and Mr. Assistant Attorney General Lovett were on the brief, for the United States.

MR. JUSTICE MCKENNA delivered the opinion of the Court.

Appeal from judgment of the Court of Claims dismissing petition of appellant in which she prayed judgment against the United States for the sum of \$236,750.

A summary of the allegations of the petition is as follows:

The Government was engaged in the manufacture of smokeless powder at its station at Indian Head, Maryland. Gathmann had under consideration, with a view to application for patents, methods of drying the materials of the powder, and in consequence of conversations with the Chief of the Bureau of Ordnance of the Navy Department, he made to the Bureau the following proposition:

"1839 Vernon Ave., N.W.,
Washington, D. C., March 24, 1903.

Sir:

The undersigned has made an invention 'Method of drying materials,' for which patent has been filed Feb. 9, 1903, Series No. 142,653.

Now, in consideration of the Navy Department building an apparatus for testing this method, without expense to me, I hereby give the Navy Department the option of using my method of drying materials, if they find it to their advantage, by paying to me, my heirs, or my legal

representatives, \$0.01 (one cent) for each pound of material dried by my method.

Very respectfully,

LOUIS GATHMANN.

Admiral O'Neil,

Chief of Bureau of Ordnance."

He delivered with the proposition a plan or drawing for an experimental apparatus.

To the proposition the Chief of the Bureau of Ordnance replied as follows:

"Address Bureau of Ordnance, Navy Department, and refer to No. 3585.

Washington, D. C., March 26, 1903.

SIR:

Referring to your communication of March 24th, 1903, offering the Navy Department the option of using your method of drying materials, on payment of one cent per pound on materials so dried:

The Bureau has to inform you that it accepts your proposition, and has ordered one experimental apparatus for drying smokeless powder, constructed in accordance with plan submitted by you. This apparatus will be tested without expense to you, and, if it works satisfactorily to the Bureau, the Bureau agrees to pay you, your heirs or legal representatives, one cent for each pound of smokeless powder dried by the method covered by your application or applications filed or to be filed with the U. S. Patent Office, provided a patent or patents is or are issued to you therefor.

Respectfully,

CHARLES O'NEIL,

Chief of Bureau of Ordnance.

Mr. Louis Gathmann,

1839 Vernon Avenue,

Washington, D. C."

At the time of the conversation of Gathmann with the Chief of Ordnance and his proposition and the reply to it Gathmann contemplated applying for patents for his methods, and on February 9, 1903, and subsequent dates, he made applications for patents and patents were issued to him for his methods, and at various times from April, 1909, to April, 1915, the Government made use of the processes and methods covered by the patents in the manufacture of smokeless powder to the amount of 23,675,061 pounds thereof, and became indebted to the estate of Gathmann in the sum of the petition, to wit, \$236,750.

A general traverse was filed to the claim. Upon the issues thus formed and upon considering the evidence taken, the Court of Claims made findings of fact, and from them deduced, as conclusions of law, that appellant was not entitled to recovery and dismissed her petition.

The court decided that the proposition made by Gathmann's communication and the reply thereto presented an option only, and not a contract, and that it was terminated by the Bureau by a letter addressed to Gathmann, October 14, 1904, which was as follows:

"Referring to your apparatus for drying powder, installed at the naval proving ground for trial: The bureau forwards herewith a copy of the report made by the inspector of ordnance in charge of that station for your information. After carefully considering this report the bureau is of opinion that this apparatus has failed to demonstrate anything that would warrant further experiment with it, and the bureau has instructed the inspector of ordnance in charge of the naval proving ground that, when the drier can hold no more samples the whole amount be put in the dry house until dried to the proper volatiles."

The court decided, besides, that the Government had not used Gathmann's methods. Appellant attacked both

rulings but concentrates her attention upon the first. The existence of the second, she assumes, is demonstrated by the physical laws of nature, of which the court will take judicial notice.

The specifications of error against the first ruling are as follows:

"(1) The letters made an express contract of license for the full term of the patents; (2) the license could not be renounced or ended in any manner, except by mutual consent or the fault of Mr. Gathmann; (3) he had the right after the receipt of the letter of October 14, 1904, to regard the license as still in force and to sue for the unpaid royalties, the Government having used the inventions thereafter; (4) what was said prior to the letters of March 24th and 26th, 1903, should not be considered; (5) the Court of Claims should not have considered the development and state of the art prior to the issuance of the patents; (6) the licensee is estopped from denying the validity of the patents."

To estimate these contentions, the findings of the court must be considered. A summary of them, stated narratively, is as follows:

The material of smokeless powder in its first stages is in a plastic condition, containing about 40% of moisture due to the presence of ether and alcohol, called the "solvent." To make the powder ready for use the solvent must be reduced to between 4% and 7% according to caliber. The process requires several months' time. The elements of the solvent were expensive and it became an object to the Government and its manufacture of the powder to save them for re-use.

As early as 1900 the Government had used along with other methods of drying what was known as the closed-circuit method of drying and solvent recovery. In this method there is, generally speaking, a heating chamber, a powder chamber and a condensing chamber, with the

necessary connecting pipes or conduits and means for effecting circulation of the air in the circuit, as by fan or by gravity. In operation the warm air from the heating chamber passes on to the powder chamber, where it absorbs solvent from the "green" powder, then passes on to the condensing chamber, where the solvent carried by it is condensed to liquid form, the air then passing on to the heating chamber again for reheating and repetition of the cycle.

When the powder is newly made, or "green," the solvent is given off rapidly; but as the percentage of the solvent in the mass is reduced, it volatilizes less rapidly and comes off less freely. When the solvent is reduced to about 10%, this closed-circuit process is discontinued and the drying of the powder is completed in the ordinary drying houses.

The plans of the apparatus used by the Government in 1900 were secured from the California Powder Works, of California, by whom the apparatus was understood to have been originated. It illustrates "the closed-circuit method."

Louis Gathmann was an inventor and was interested in improving the method of expediting the manufacture of smokeless powder and had discussed the question with Admiral O'Neil. The Government at times had two systems; one for merely drying by hot air, and the other for both drying and recovery of the solvent. Gathmann claimed a method that would do both in a very much shorter time and proposed that a test be made. The letters we have quoted grew out of the conferences between Gathmann and Admiral O'Neil and Gathmann's representation furnished the chief inducement to the Admiral to enter into the agreement shown by the letters.

Pursuant to the agreement or option shown by the letters, the United States under the direction and supervision of Gathmann, at its own expense, constructed and

exhaustively tested at its Indian Head (Maryland) powder plant the experimental apparatus and method so proposed by Gathmann. The apparatus and method were substantially the same as those shown and described in Gathmann's letters patent.

The tests began in October, 1903, and continued until October, 1904, during which time reports of the results obtained by the tests, comparative and otherwise, were periodically made by the officer making the tests, comparison being made with results obtained from concurrent operations under the regular Government method. In making the tests, the instructions and wishes of Gathmann were complied with except that he desired a continuous and unbroken operation, though he had acceded at first to the closing down of the operation of the Government plant on Sundays. His desire was not acceded to.

In the tests the time required for drying the powder was not reduced, nor did it appear that the former methods used and results obtained by the Government in drying and solvent recovery were otherwise improved upon, nor did Gathmann's apparatus work satisfactorily to the Bureau of Ordnance, and at the close of the tests, Gathmann was so notified by a letter from the Acting Chief of Ordnance.

No change was made in the Government's solvent recovery and drying processes as a result of the test of Gathmann's method.

On June 28, 1904, a patent, No. 763,387, in pursuance to his application of February 9, 1903, was issued to Gathmann. On the same day there was granted to Gathmann and his assignees of a fourth interest therein, United States patent No. 763,388. These patents and the applications upon which they were granted were the applications and patents in contemplation by Gathmann, and Admiral O'Neil in their respective letters of March 24th and 26th, 1903.

Beginning in 1907 the Navy Department at various times in the manufacture of smokeless powder used drying and solvent-recovery apparatuses and methods.

They are illustrated by figures attached to the findings. From August 1, 1910, to 1916, an apparatus known as the box-type method was used in which "the circulation is gravity circulation, induced wholly by the heating and the cooling of the air in the different parts of the circuit." It is not necessary to reproduce the illustrations, and the processes need but little explanation. They are all of the closed-circuit method of drying and solvent recovery. All have a heating chamber, a powder chamber and a condensing chamber with connecting pipes or conduits and means of effecting circulation of air in the circuit, as by fan or by gravity. It is not necessary to compare their mechanisms. We think that the apparatus received by the Bureau from the California Powder Works did not differ in essential structure from them and, of course, it differed from that of Gathmann's apparatus. And differed from them necessarily, otherwise Gathmann would have had no purpose in submitting a proposition to the Bureau. The difference was in the method—amount of vapor, means "provided," to quote the patent, "to produce a vapor-laden atmosphere in the drying chamber" and "so as to maintain", to quote the patent further, "a substantially vapor-saturated atmosphere in the drying chamber nearly to the end of the operation of drying" In other words, the vapor from the moisture of the materials was added to "by admitting vapor as steam."

Considering the methods, their illustrations, and the letters exchanged by Gathmann with the Bureau of Ordnance, the conclusion of the Court of Claims was that a contract was not created. "At most," the conclusion was, "a mere option was granted by Gathmann to the Government to use his method if found suitable after mak-

ing a test of certain apparatus furnished by him, which he continued to improve or change." And again, "There was never any agreement between the parties to use Gathmann's method, and all we have is, as has been stated, an option granted, declined, and terminated."

This conclusion appellant resists, and insists here, as she insisted in the Court of Claims, that a contract was created with its comprehensive and determining effect, it having continued, is the contention, after the date of the letters. That a contract existed or continued we cannot concede to appellant. But whether option or contract, we think it was terminated. There was an election given to the Government to be exercised by it according to the judgment of its officers of a test of the "experimental apparatus" submitted by Gathmann. The test was made, judgment was exercised and its effect notified to Gathmann in the letter of October 14, 1904. Gathmann's letter gave "the option of using" his "method of drying materials, if they [Navy Department] find it to their advantage, by paying to" him, his heirs or legal representatives "0.01 (one cent) for each pound of material dried by" his "method."

Clearly, therefore, there was a conditional proposal and an acceptance upon the condition that the apparatus, after test, should work "satisfactorily to the Bureau." It did not so work and the Bureau so declared to Gathmann.

It is true that there was no response by Gathmann to the letter of the Bureau. His silence, however, was tantamount to acquiescence. It does not appear when that silence was broken. The original petition was filed in this case April 17, 1915, that is, more than ten years after the Bureau's action in declining the proposal. We think that he could not keep the Government in obligation, uncertainty and restraint all that time, or even until April, 1909, the first date alleged of the use by the

Government of his apparatus. He, therefore, must be considered as having accepted the decision of the Bureau and the termination of the relation created by the letters whether it was obligation or option, "right" or "privilege." Responding, therefore, to the contention of appellant that a contract (license, to use appellant's word) can "not be renounced or ended in any manner, except by mutual consent or the fault of Gathmann," we think there was such consent—that which must be considered as tantamount to consent.

We do not think it is necessary to review the claims of the patents and wherein either of them is an advance upon the uses and knowledge of the world, and, necessarily, including the methods of the Government. The Court of Claims has done this and, we think, so satisfactorily, that we content ourselves by referring to its opinion. We need only to say that Gathmann emphasized the distinction of his patents from all that preceded them as using a "vaporous or vapor-laden atmosphere," and that such necessarily existed or will occur in the methods used by the Government.

It is counsel's contention that it is "inevitable that vaporous and vapor-laden atmosphere would be created the instant the heated air came in contact with the green powder, and would continue vaporous and vapor-laden until all the alcohol and ether were extracted from the powder or the powder be removed from the drier." And of this, it is asserted, this Court takes judicial notice as "the law of physics," and the further assertion is that, "Of course this contact of the heated air with the alcohol and ether caused the air to become vapor laden whether the defendant wished it or not." The assertions prove too much. They leave the patents without basis and the distinction they express and dwell on as merely verbal. If the asserted result was inevitable in the method of the patents, it was inevitable in the method

in use prior to the patents, and, we repeat, the patents are left without justification.

The conclusion, therefore, must be that if the methods of the patents are different from the prior art by reason of the "initial vapor-laden atmosphere by admitting vapor as steam" the Government does not use it; if that be not its distinction, and the methods of the prior art inevitably have it, the patents are no advance upon that art and are invalid.

Judgment affirmed.